



CORPORATE PLAN

for Financial Years 2022–2026



Snowy Hydro Limited

ABN 17 090 574 431
Monaro Highway, Cooma, NSW, Australia
[snowyhydro.com.au](https://www.snowyhydro.com.au)

LEGAL NOTICE

Disclaimer

This Corporate Plan contains various long-range plans, projections, high-level estimates and other forward-looking information (Estimates). Those Estimates are based on the considered professional assessment of present economic and operating conditions, Australian Government policy at the time of writing this Plan, and assumptions regarding future events and actions which, at the date of writing this Corporate Plan, are expected to take place.

The Estimates involve known and unknown risks, uncertainties and other factors beyond control that may cause Snowy Hydro Limited's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the Estimates.

While the Estimates are based on the best considered professional assessment, the management team and officers (as defined in the *Corporations Act 2001* (Cth)) of Snowy Hydro Limited do not give any guarantee or assurance to any third party that the results, performance or achievements expressed or implied by the Estimates will occur. The Estimates must not be relied on or considered to represent what will happen by a third party.

Introduction

The Corporate Plan for Snowy Hydro Limited (Snowy Hydro or the Company) sets out who we are, what we do and how we do it over the five-year reporting period from 2022-2026 (Plan Period). It encompasses Snowy Hydro Limited and its wholly-owned operating subsidiaries comprising the Red Energy, Lumo Energy and Direct Connect Australia businesses.

Snowy Hydro was incorporated on 28 June 2002, when the Snowy Mountains Hydro-electric Authority was corporatised under the *Snowy Hydro Corporatisation Acts 1997* of the Commonwealth, NSW and Victoria. Since corporatisation in 2002, Snowy Hydro has significantly expanded its footprint beyond the Snowy Mountains Hydro-electric

Scheme. Today, Snowy Hydro operates a growing and profitable energy retailing, wholesale energy risk management and power generation business, which includes the Snowy 2.0 Project and the Hunter Power Project.

Snowy Hydro is 100% owned by the Commonwealth of Australia.

Snowy Hydro is governed by its *Constitution* (the Constitution) that sets out the responsibilities of the Board and Snowy Hydro's reporting obligations, subject to the *Corporations Act 2001* (Cth) (Corporations Act) and the *Public Governance, Performance and Accountability Act 2013* (Cth) (PGPA Act).

Snowy Hydro prepared the Corporate Plan (Plan) as required by section 95(1) of the *Public Governance, Performance and Accountability Act 2013* (Cth) (PGPA Act), the *Public Governance, Performance and Accountability Rule 2014* (Cth) (PGPA Rule) and the *Commonwealth Government Business Enterprise Governance and Oversight Guidelines* (January 2018) (GBE Guidelines).

The Plan aligns with the most recent Statement of Expectations (SoE)¹ issued by Shareholder Ministers.

Under section 34 of the PGPA Act, if the Government has published a Statement of Key Priorities (Priorities) and any of these Priorities relate to the Company's business, the PGPA Act requires that the Company's Corporate Plan aligns with those Priorities. Under sections 22 and 93 of the PGPA Act, the Finance Minister may make a Government Policy Order (GPO) specifying a policy of the Australian Government to apply to one or more Government Business Enterprises (GBE). Under Rule 6.2.1 of Snowy Hydro's Constitution, the Company's Shareholder Ministers may give a written instruction or direction to the Directors to exercise the Company's powers in a specified manner if the Shareholder Ministers consider it in the interests of the Commonwealth. At the time of writing this Plan, there were no Priorities, GPOs or written instructions or directions that relate to the Company.

¹ SoE dated 26th February 2019





TABLE OF CONTENTS

Our purpose and strategy	6
About Snowy Hydro	7
Our values	11
Chair's Message.....	13
Managing Director's message	14
Financial Year 2021 performance	20
The future of the National Electricity Market	33
Business environment	36
Our generation business	44
Our retail business	48
Our capability	50
Environmental, Social and Corporate Governance Statement	52
Plan performance measures	56
Risk management	62
Glossary	66
Appendices	70
List of requirements	71



OUR PURPOSE AND STRATEGY

ABOUT SNOWY HYDRO

Snowy Hydro is an Australian-owned, dynamic, integrated energy business. Our role is to underpin energy security, enable the transition to renewables and increase competition in energy markets, leading to lower prices for consumers.

In short, we are here to keep the lights on and to help the National Electricity Market (NEM) transition to a decarbonised state, now and into the future.

We have combined the power of the Snowy Scheme with fast and reliable gas and diesel-fired peaking generators. In total, we have 15 power stations, a pumping station, and more than 5,500MW of generating capacity across New South Wales, Victoria and South Australia.

The NEM is in the midst of a multi-decade transformation – from baseload coal with some peaking assets to variable renewable energy such as wind and solar with firming and storage. Snowy Hydro is at the heart of this change.

As a leader in the transformation of Australia's energy system, we conduct all our dealings with integrity as we maintain and promote our core values.

We lead the market in energy storage and capacity products and are the fourth-largest energy retailer in the NEM².

Our mix of energy storage and dispatchable generation capabilities underpin the products we provide customers. It is Snowy Hydro's end-to-end wholesale product and generation mix that will meet and sustain increasing demand in the coming decades as more variable renewable energy comes online and coal-fired generators progressively retire.

Our Red Energy and Lumo Energy retail brands hold a vision to delight our customers by providing an award-winning and market-leading customer experience. Our sustained track record in that regard is unrivalled in the NEM.

Our entire business is inspired by Snowy Hydro's history, brand identity and reputation.

We provide critical water supply services to the nation's food bowl – the Murray-Darling Basin – through the Snowy Scheme, in accordance with the Snowy Water Licence.

Snowy Hydro is committed to supporting the local communities in which we live and work. Each year we invest in our chosen areas of education, youth health and regional capacity-building through our partnerships with the Clontarf Foundation, the Country Universities Centres, the PCYC, the Young Driver Training Program and many others.

2 By customer numbers.

snowyhydro

**DIRECT
CONNECT**
MAKES MOVING EASY



red[™]
energy

FAST FACTS SNOWY SCHEME

9

POWER STATIONS

NAME	CAPACITY (MW)	NO. OF UNITS
Tumut 3	1,800	6
Murray 1	950	10
Murray 2	550	4
Tumut 1	330	4
Tumut 2	287	4
Blowering	80	1
Guthega	60	2
Jindabyne Mini Hydro	11	1
Jounama Small Hydro	14	1

4,100 MW

1

PUMPING STATIONS

at Jindabyne and pump storage capability at Tumut 3

16

MAJOR DAMS

[APPROX **4,800 GL**
AT LAKE EUCUMBENE]

TOTAL STORAGE



7,000 GL

OR

12 X



Sydney Harbour Volume

145km

INTER-CONNECTED
TUNNELS

80km

AQUEDUCTS

SNOWY 2.0



2,000 MW
GENERATION
CAPACITY



350,000 MWh
(175 HOURS OF
STORAGE AT
FULL CAPACITY

33

HYDRO ELECTRIC
TURBINES



4,100 MW
GENERATING
CAPACITY

RETAIL BUSINESS

1 MILLION + CUSTOMERS

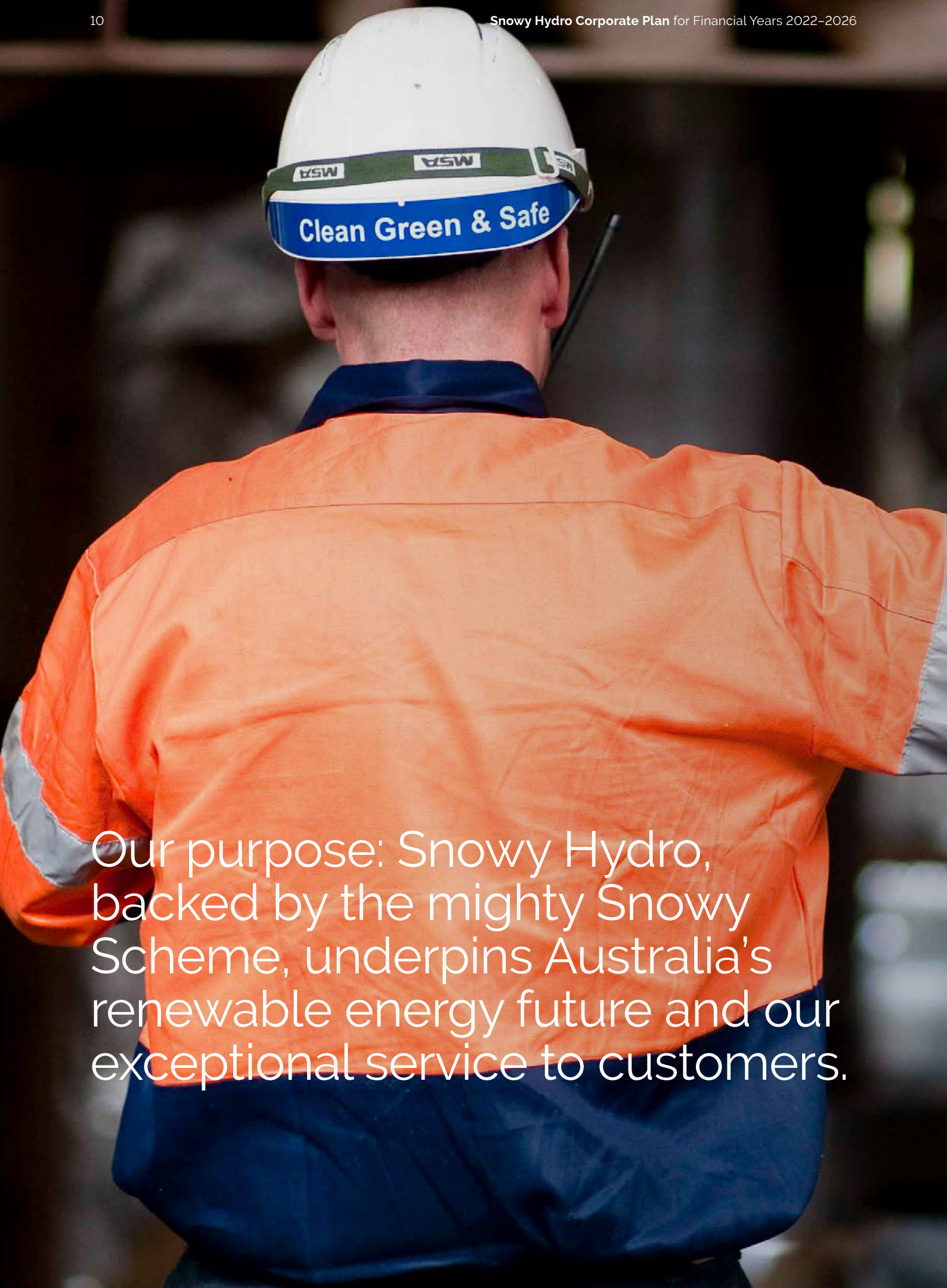
OTHER SNOWY ASSETS

GAS

VALLEY POWER	>	300 MW
LAVERTON NORTH	>	320 MW
COLONGRA POWER	>	667 MW
TOTAL	>	1,287 MW

DIESEL

SA DIESEL PEAKING GENERATION	>	136 MW
------------------------------------	---	--------



Our purpose: Snowy Hydro, backed by the mighty Snowy Scheme, underpins Australia's renewable energy future and our exceptional service to customers.

OUR VALUES

Our Values are the heart of who we are at Snowy Hydro. They guide us in everything we do from how we interact with each other, our customers and external stakeholders to the way we deliver our Objectives and Purpose.

Our Values are ingrained in our history. Our first Commissioner, Sir William Hudson, was an ambitious and inspirational leader who knew how to gather and lead a team of great people. He won the respect of workers on all levels by taking practical measures for their well-being. He ensured they had good pay, food and quarters and housing for families and was committed to safety. Sir William Hudson's focus on safety ensured we introduced many safety initiatives, in some cases decades before they became law like the introduction of more than 3,000 seatbelts from May 1960 – nine years before they became compulsory.

From the construction of the Snowy Mountains Scheme to the integrated retail and generation business we are today, our Values define us and guide our behaviour, choices, decisions and interactions with each other, our customers, contractors and communities.

We proactively celebrate our Values including through our annual Values Awards program that recognises and celebrates those who are leading the way and truly living our Values.

"Snowy Hydro is an extraordinary company, it really is, and we're an extraordinary company because we're a true Values-driven organisation. Our Values of safety, agility, teamwork, ownership decency, and courage sit at the heart of everything we do at Snowy. Our Values are not about what we do as individuals, they are about how we go about what we do - it's about what we say, how we interact, our decision-making and they really, truly, do sit at the heart of our organisation and are incredibly important to us."

Guy Boardman, Manager Major Accident Prevention

"Our Values are really important; they define the way we work and are the background to the decisions that we make every day. I am very sure that we genuinely believe in them – you see it every day, people take them to heart and that's what makes us special."

Peter Symons, Winner, 2020 Living the Values – Sir William Hudson Award

Safety



Safety is always our number one priority

Teamwork



We help each other succeed through support and trust

Ownership



We take pride in our work and own our choices

Agility



We are adaptable and embrace change

Decency



We treat others the way we'd like to be treated

Courage



We speak up and act for what's important



CHAIR'S MESSAGE

Snowy Hydro has performed strongly across the whole group for safety, EBITDA and customer satisfaction despite the pandemic, milder weather conditions and continuing significant regulatory intervention in a post bushfire world.

The Company delivered a robust safety performance, delivered consolidated underlying EBITDA of \$577 million, paid dividends of \$122.7 million during the year taking the total over five years to \$1,072 million, retained a BBB+ credit rating at year-end and swept customer satisfaction awards. Snowy Hydro's positioning in its key market segments is solid and growing. Cost savings and strong customer growth worked to offset declining energy prices and weak margins

Throughout the financial year, Snowy Hydro's activities were characterised by asset portfolio developments that are critical to the Company and the NEM, the significant progress with Snowy 2.0 and the announcement of our 660-megawatt (MW) Hunter Power Project being approved by our Shareholder, the Commonwealth Government, on 19 May 2021.



Throughout the year, we have maintained focus on the communities in which we operate. We have continued to invest in our chosen areas of education, youth health and regional capacity-building through our partnerships with the Clontarf Foundation, Country Universities Centres, PCYC, Young Driver Training Program and many others.

Snowy Hydro could not have achieved such solid outcomes in these circumstances without a strong team. Our employees, contractors and other service providers have performed superbly during this incredibly challenging period. On behalf of the Board, I would like to put on record our thanks and appreciation.

David Knox
Chair

MANAGING DIRECTOR'S MESSAGE



Despite significant and unprecedented external challenges, Snowy Hydro delivered a robust health and safety performance, met the planned level of dividends, retained a BBB+ credit rating at year-end and continued to operate sustainably and responsibly.

These are significant achievements in a year where the energy market has been impacted by the pandemic and some of the most unusual weather conditions witnessed in recent times.

Retail Business

The Retail business reduced cost to serve, grew gas and electricity accounts to a record 1.16 million, up 23,000 over the year despite customer service operations and sales channels being significantly impacted during 2021 by COVID-19 restrictions. In addition, the Retail business maintained its lead in Net Promoter Score and customer satisfaction against its peers and once again received Canstar Blue Awards for Most Satisfied Customers, topping the ratings amongst NSW electricity suppliers for the seventh straight year. In addition, we won national satisfaction awards for dual fuel and solar and were credited as the Most Trusted Energy Provider nationally. This record of growth and award-winning customer service was a significant achievement during a challenging time operationally and in a highly competitive and regulated environment.

Generation Business

Our highly reliable portfolio of physical assets continues to deliver. The generation business met all key operational requirements, although challenges are arising from the seismic shifts in the NEM's generation fleet. Our focus continues to be on ensuring that not only does the overall portfolio meet these operational requirements, but individual stations and units meet outage factors and start-reliability targets. Increased wind and solar penetration encouraged by Renewable Energy Targets and accommodative regulatory intervention

have resulted in greater energy market volatility, and thus, wear and tear on our assets, subsequently changing operational patterns significantly. The opportunity that greater renewables present for the portfolio does come with some challenges.

Despite these challenges, in the long term, this reflects a positive trend for the Company. As the market share of renewable energy continues to increase, so does demand for the Company's firming and storage capabilities and firmed renewable energy products. Snowy Hydro continues to maintain and operate a portfolio of fast-start and flexible generation to help manage the variability of increasing renewable generation. We are also developing and building the necessary utility-scale dispatchable generation and pumped-storage assets to best meet the needs of the NEM as it undergoes rapid transformation.

Snowy 2.0

Despite the unprecedented external conditions and impacts arising from the bushfires and COVID-19, the Snowy 2.0 Project (Project) has achieved key milestones and remains on track. The first tunnel boring machine (TBM) has been commissioned and excavation of the Main Access Tunnel is underway. Progress also continues on the civil and supporting infrastructure works and the Cooma precast factory is producing the first of 130,500 concrete tunnel lining segments.

As the Project transitions through the design phases, Snowy Hydro's dedication to technology to deliver the best results is evident as visitors to our Discovery Centre in Cooma experience the development of the power station, tunnels and civil structures via a state-of-the-art immersive 'walk-through'. We are not only creating another legacy asset for the mountains but also a key educational asset using the latest technology for future generations.

The safety and environmental challenges for this complex megaproject are unique. Working with the principal contractor, Future Generation JV, the team worked tirelessly to ensure the Project was ready to 'go underground'.

The timing of the southern transmission link to Melbourne (VNI West) and the transmission link to

Greater Sydney, including Wollongong to Newcastle (HumeLink), remain critical and unresolved issues. AEMO's 2020 Integrated System Plan (ISP) recognises the urgency of these links irrespective of Snowy 2.0, which must be urgently implemented to ensure system security in Victoria and NSW.

Connecting Victoria's vast potential reserves of renewable energy to the NEM's load centres, VNI West would not only immediately unlock 1,500MW of existing Snowy Scheme capacity from NSW to be dispatchable in Victoria but also permit Snowy 2.0 to balance out the system. This would be of enormous value to Victoria in times of system stress. Similarly in NSW, the NSW Roadmap legislated during the 2021 financial year will create a future source of demand for greater interconnection and transmission investment and consequently permit the Snowy 2.0 asset's full consumer benefits and system strengthening to be realised.

Hunter Power Project

The Hunter Power Project will play an important role as Australia transitions to renewables, delivering on-demand energy and least-cost, reliable and flexible capacity for the NEM. The Final Investment Decision (FID) and Shareholder approval of the 660MW greenfields project took place during the year.

At every stage of the Project, we are utilising the latest fit-for-purpose technology to provide the required firming capacity for the energy market during this transition and decarbonisation.

We expect hydrogen to play a role in the decarbonisation of Australia's national energy mix in the decades to come. Consistent with this expectation, the hydrogen-readiness of the Hunter Power Project will enable the use of a gas/hydrogen mix when the hydrogen feedstock becomes available on commercially attractive terms.

We are motivated by delivering the least-cost, highest-reliability and long-term sustainable energy solutions for our customers for generations to come. Our modelling shows that the Hunter Power Project will facilitate market entry for an estimated 1.5 to 2GW of renewables, or the equivalent of 160,000 household solar installations. It will create as many as 600 jobs during construction and inject up to \$800 million into the local economy.

The Hunter Power Project will provide first power in 2023, filling an important gap in the electricity market and ensure security of supply following the retirement of the Liddell Power Station in Muswellbrook. This Project provides necessary dispatchable 'firmed' energy, ensuring security and stability to support the volatility that arises from intermittent renewables.

National Electricity Market

Looking forward, the Plan reflects the Company's critical role in underpinning a least-cost, reliable and secure NEM as it decarbonises. With the support of the strategies set out in this Plan, Snowy Hydro's strengths will play a material role in this process, as the Company pursues growth opportunities in firming, renewable energy products and large-scale storage. Importantly, as the fourth pillar energy business in the NEM, a strong and growing Snowy Hydro is able to bring critical competition in the wholesale and retail markets.

The Plan incorporates ambitious stretch goals, including further growth in retail customers, sales of firmed renewable energy products to commercial and industrial customers as well as sales of traditional capacity products and newly developed firming and storage products to wholesale customers. Selling cost-competitive risk management products and comprehensive energy solutions will require further acquisition of 'raw'

renewable energy from wind and solar farms and extensions to gas supply arrangements, as well as additional generation capacity.

This Plan spans a critical period for the Company's balance sheet as it builds Snowy 2.0 and the Hunter Power Project recovers from the bushfires, begins the cycle of restoring water storages to pre-drought levels and maintains its existing asset fleet to support the NEM's clean energy transition. The Company continues to manage its balance sheet carefully to service the significant calls on capital. Short-term pressure on financial metrics exists; however, the Board remains committed to ensuring planned capital expenditure is responsible, efficient and effective while protecting its target BBB+ credit rating.

This expenditure will enhance the Company's asset portfolio and strengthen its position as the linchpin to the NEM's transition to a low carbon future.

Snowy Hydro is in excellent shape, and I look forward to putting our Corporate Plan into action.

Paul Broad

Managing Director and CEO



SNOWY HYDRO KEEPS PEOPLE SAFE AND STRIVES FOR SUSTAINABLE BUSINESS PERFORMANCE

Snowy Hydro aims to be a good neighbour and an exemplar in Australian business and industry. As a good and decent company, we maintain the highest respect for our customers, employees, responsibilities and expectations.

Safety is the Company's highest priority.

Snowy Hydro is committed to getting the job done, but above all, we want everyone to go home safely at the end of the day.

There are four core components to our safety and wellness strategy:

1. Our people begin and end each workday safely and well. Their physical and mental health is improved as a result of working for Snowy Hydro. We believe we are all responsible for making our workplace safe and healthy, that harm to health and wellbeing is preventable, and our people and Company can flourish. Additionally, we positively impact the safety and wellbeing of the households and communities in which we live and operate;
2. Leaders lead from the front being visible, lead safety conversations, ask the right questions and foster a 'no fault' learning environment;

3. Our people recognise hazards, are empowered to 'stop the job', anticipate changed conditions, implement controls and actively contribute to 'mate looking after mate'; and
4. Simple and more streamlined systems assist us to proactively identify hazards, deliver controls that work, and provide the required checks and balances to ensure we use the controls and continue to improve.

Snowy Hydro continues to prioritise investment in safe plant and equipment, safety culture, leadership training, critical risk and hazard identification and engineering controls (Major Accident and Single Fatality Prevention), leveraging technology-based safety solutions to increase speed and ease of reporting, and extensive wellbeing programs, especially in rural and regional areas.

With Snowy 2.0, the Principal Contractor (PC) carries primary accountability for safety. However, we require the PC to operate consistent with Snowy Hydro's health and safety principles, targets, objectives and strategy for the Project as described in the Employers Requirements. A comprehensive program of assurance activities, including inspections, critical control verifications and audits, are undertaken by Snowy Hydro to verify that the PC is taking the necessary and appropriate steps to manage the health and safety of all Snowy 2.0 workers.

SNOWY HYDRO MAINTAINS FINANCIAL CREDIBILITY FOR THE MARKET

Maintaining a strong investment-grade credit rating is core to Snowy Hydro's successful operations.

Snowy Hydro's central position in the NEM and demonstration of its financial resilience enables us to enter into long-term contracts with buyers and sellers of the wholesale market. Our wholesale customers value this greatly for their own risk management.

More recently, Snowy Hydro is working the balance sheet harder as we increase financial commitments to build Snowy 2.0 and the Hunter Power Project. We must ensure and demonstrate to our capital providers that we are getting value for money for every dollar spent, controlling costs and effectively managing financial risks.

Due to the nature of the Company's contracting operations, our counterparties are exposed to long-term Snowy Hydro credit risk. Therefore, a strong investment-grade credit rating, defined as BBB+ or better, is essential in order to write risk management products, hedge contracting positions for retail and Commercial & Industrial (C&I), and enter into long-term contracts for energy and renewable energy certificate purchases. Maintaining a strong rating from Standard & Poor's (S&P) remains a top priority.

There are two main quantitative rating metrics utilised by S&P: Net Debt/EBITDA and Free Funds from Operations (FFO)/interest. Based on these, S&P's current assessment rates the Company as an ASX top-50 equivalent entity, and as meeting the criteria for a BBB+ credit rating.

The Company maintains a number of mitigants to protect Snowy Hydro's capital structure in the event that ordinary-course-of-business revenues necessitate additional funds. These include restructuring the energy market contracts portfolio, increasing hydro generation within the flexibilities provided in the Snowy Water Licence, and risk-assessed deferral of non-essential development capital projects.

FINANCIAL YEAR 2021 PERFORMANCE

FY21 HIGHLIGHTS

Snowy Hydro performed exceptionally well in the 2021 financial year (FY21) under significantly difficult circumstances. Despite the bushfire recovery, COVID-19 pandemic, mild weather conditions, falling NEM prices and continued regulatory intervention, Snowy Hydro has delivered its key objectives.



FINANCIAL

- 1 Generation Revenue FY21**
exceeded planned revenue
- 2 Retail Revenue FY21 and EBITDA**
exceeded plan
- 3 Underlying EBITDA FY21**
exceeded plan



CUSTOMERS

1.16m
retail gas and electricity accounts

Customer growth of

23,000+



brand amongst
peers for Net
Promoter Score,
8th year running

↑ 6% NSW+SA



2021 Canstar
Blue Award for
Most Trusted
Energy Provider
nationally.

100% customer
satisfaction

for the fourth consecutive year amongst C&I customers,
measured by Utility Market Intelligence.



SAFETY

A REDUCTION IN OVERALL INCIDENTS RECORDED IN GENERATION IN FY21:

5 significant safety incidents in FY20
(one injury & four near hit incidents)

3 significant safety incidents in FY21
(two injuries & one near-hit incident)

OUR STORY

A new behavioural safety program called Our Story has been delivered by our leaders for our people, which will further strengthen Snowy Hydro's positive safety culture in the future.

RETAIL
BUSINESS

ZERO

reportable injuries
for 2021

**Over 21 months and 3+ million
hours worked since the last
significant safety incident.**

FY21 PERFORMANCE

Against the bushfire recovery, COVID-19 pandemic, mild weather conditions, falling NEM prices and continued regulatory intervention, the Company performed strongly with Consolidated Underlying EBITDA exceeding plan and paying dividends of \$123 million. Snowy Hydro's positioning in its key market segments is solid and growing. Cost savings and strong customer growth offset declining energy prices and weak margins.

The gas and electricity markets of FY21 responded to the relatively high level of thermal baseload plant availability and extremely unusual weather conditions. Baseload economics have been called into question; however, the ownership structures and contract positions of these plants make it difficult to publicly observe.

Equally, Snowy Hydro's highly contracted position muted the impact of particularly low average wholesale prices and a complete absence of volatility over Summer 2020/21 on financial results. Snowy Hydro will continue to take the opportunity to restore water storages to pre-drought levels and to service our customers in a COVID-19 environment where customer-demand patterns have changed dramatically.

Throughout FY21, Snowy Hydro's activities were characterised by milestone growth in asset portfolio developments with significant progress with Snowy 2.0 and the announcement of our 660MW Hunter Power Project (HPP) being approved by our Shareholder, the Commonwealth Government, on 19 May 2021. In addition, Snowy Hydro focused on the recovery from the bushfires, restoring our storages to pre-drought levels and adapting business activities for mild weather conditions, while advocating for more transmission and supporting the decarbonisation of the NEM.

Snowy 2.0

Following the Notice to Proceed (NTP) for the Main Works in August 2020, site works, design and procurement of long-lead items are progressing well, with the Project on track to deliver first power in 2025, notwithstanding the impact of the bushfires and COVID-19. In particular, the three Tunnel Boring Machines (TBM) required for the Project have been largely delivered to site, the first TBM has been assembled and commissioned, the exploratory camp is complete and the main camp construction is underway, and the Polo Flat, Cooma, precast concrete segment factory to support TBM operations is almost complete, with automated carousel production about to begin.

Significant economic benefits from the Project are flowing into the Snowy region, through local procurement and job opportunities. To date, more than 150 local businesses have been involved in the project and there has been more than \$65 million injected into the local economy.

The evolution of the NEM is consistent with the projections that underpinned the Snowy 2.0 FID in December 2018.

Hunter Power Project

The total capital cost of the Hunter Power Project is expected to be \$600 million for the 660MW gas plant. The majority of capital works will occur over FY22 and FY23 with a separate package of works covering the construction of the gas lateral. The gas infrastructure will be built, owned and operated by APA, with Snowy Hydro securing an offtake/availability agreement to use the pipeline and facility. The capacity factor of the plant is estimated to be 2-5% per cent per year; however, this varies according to market demands.

Scheduled for completion by December 2023, the Hunter Power Project has been timed to be in place for Summer 2023. Snowy Hydro is delivering on its promise with this project and commits the Company to the Hunter Region by providing up to 600 new direct jobs during peak construction and 1,200 indirect jobs across NSW. The power station will be capable of taking 10% hydrogen upon commissioning should the market specifications in the gas market accommodate it. There is also the

potential for the gas turbines to be fired on a higher percentage of hydrogen in the future, providing some modifications are made to the power station.

COVID-19 recovery

The COVID-19-related economic contraction has led to further demand contraction in the NEM, accompanied by a global collapse in the oil price (and therefore gas prices), which is a major driver of peak energy prices. Meanwhile, household consumption increased under social restrictions with more people working from home, lifting average household energy bills while regulatory interventions prevented energy retailers following normal credit collection practices. This resulted in some customers de-prioritising energy bills in favour of other utilities and retail spending. This has lifted the proportion of aged debts to record levels for Retail, recovery of which is a key focus over the next twelve months.

Bushfire recovery

Non-discretionary bushfire recovery costs in the form of increased capital and operational expenditure as assets are restored and maintained to deliver core operational capability. Extensive civil work continues to provide safe access and operations of regional infrastructure and includes the rebuilding of the township of Cabramurra, which was significantly damaged during the bushfires. This will continue to support the ongoing operations and maintenance of assets and Snowy Generation into the future.

Droughts and restoring storages to pre-drought levels

Inflows in FY21 were close to average. Multiple years of below-average inflows leading up to FY21 resulted in low water levels in the major Snowy Scheme Storages and will take a number of years of above-average inflows to refill. The Company continues to meet water release requirements in accordance with the Snowy Water Licence. The Snowy Scheme is a major source of water for the Murray Darling Basin, so releases become vital in times of drought, and storage levels are actively managed to optimise the benefits of the Snowy Scheme for water and energy users.

Mild weather conditions

Daily maximum temperatures meaningfully influence electricity demand. The average maximum temperature in NSW and Victoria over summer was 0.27°C below the long-term average. In contrast, the previous eight summers averaged approximately 2°C above the long-term average.

Figure 1: The mean maximum temperature anomaly (VIC and NSW combined) for summertime (Dec–Feb) in recent years

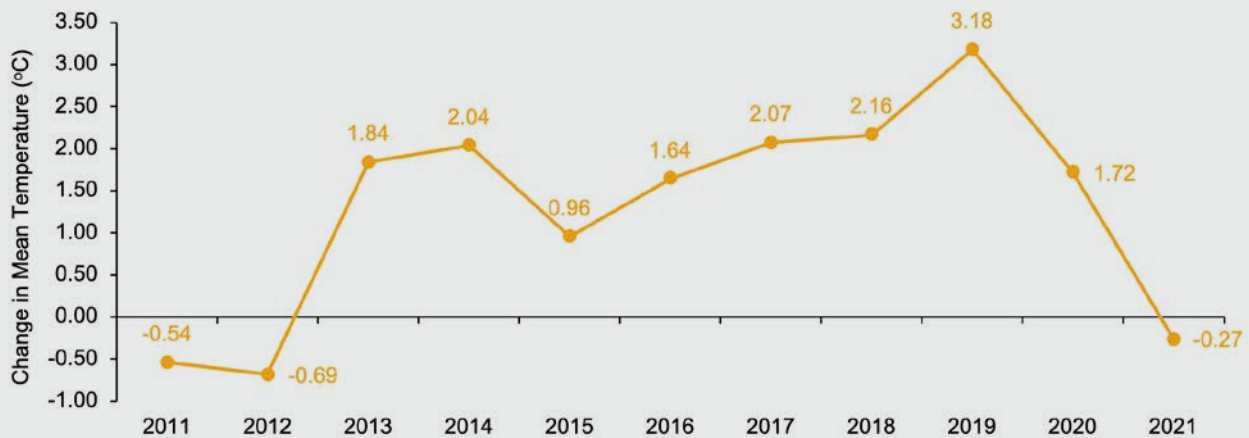
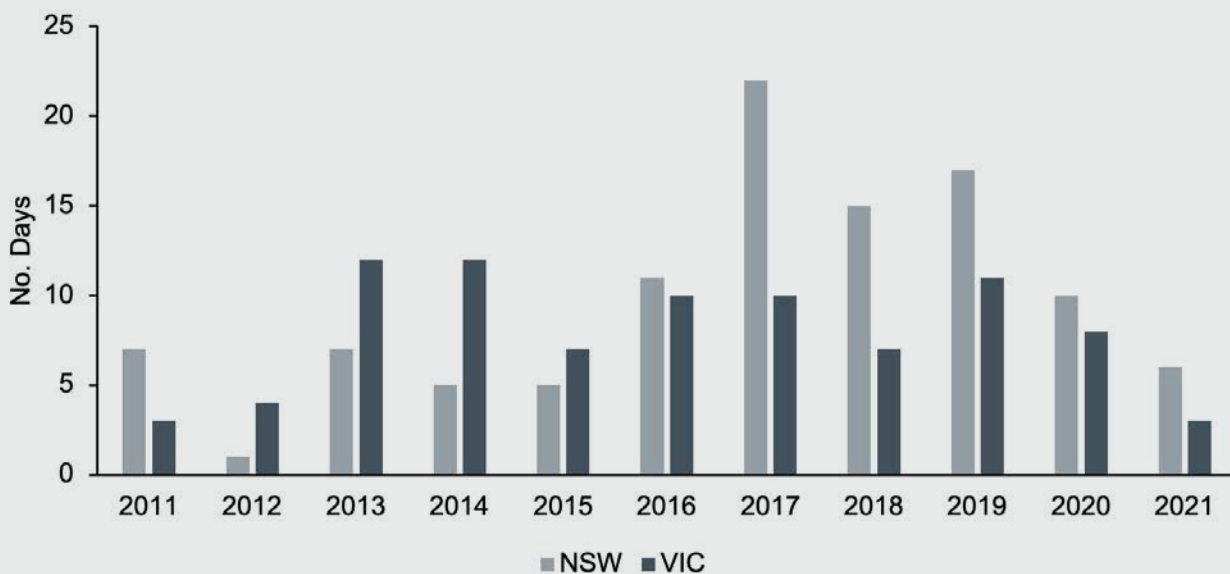


Figure 2: Number of 'extreme hot' days (max temperature greater than 35°C) per summer in recent years



In addition, the frequency of extreme hot days (maximum temperature greater than 35°C) decreased during summer, with Bankstown, NSW recording only six, whereas for each of the previous five years at least ten extreme hot days were recorded. Melbourne had a similarly mild summer, with only three extreme hot days, the lowest value since 2011.

The 2020/21 summer was cooler compared to the previous decade and acclimatisation to 'hot summers' resulted in electricity demand well below the outcomes from recent years.

These unseasonably soft conditions placed intense pressure on spot and forward electricity prices and revenue outcomes.

Regulatory reform

Numerous regulatory reforms have been initiated in response to rapid transformation in the market, in particular the displacement of coal by weather-dependent forms of generation capacity. In recent years, there have been more than 50 open rule changes considered by the AEMC, and when combined with the Energy Security Board (ESB) post-2025 market design process, represents the most ambitious reform agenda since the inception of the NEM.

Snowy Hydro supports a market-based approach to reform. In particular, the Company welcomes the proposal to value and create markets for essential system services. These include fast frequency control and inertia markets and reforms to primary frequency control. Without the necessary 'missing' system services markets, the NEM will be left with continued interventions to maintain system security, with consumers bearing the associated costs of those interventions.

A further important reform relates to transmission infrastructure. More effective transmission access is critical to maintaining system security and reliability during the clean energy transition. In particular, implementing AEMO's ISP as soon as possible will harness existing and new firm assets, which will be needed to manage growing market volatility. The Company supports regulatory initiatives to reform transmission planning arrangements.

The NSW Roadmap

Recent years have witnessed an increasing fragmentation of the NEM. States have increased independence, introducing state-specific energy reforms and renewable targets against the harmonised approach that led to the creation of a national market.

The NSW's government's Electricity Infrastructure Roadmap (Roadmap) is a notable example. While the Roadmap is laudable in its ambitions, and in particular should increase the supply of low-cost renewable energy, it does not provide sufficient clarity on the much-needed augmentation of the transmission network to support its ambition.

Lack of transmission capacity is a critical constraint on the development of new renewable developments. If the transmission network issues are resolved in line with AEMO's ISP then the NEM can decarbonise in an orderly manner without compromising system stability.

Decarbonisation of the NEM

The NEM is experiencing a long-term decline in total annual demand for energy while undergoing a rapid transition to renewables (wind and solar) as its primary source, with an increased rate of degradation and resultant unplanned outages for coal plants. In this context, the Company is uniquely positioned to facilitate the least-cost decarbonisation of the NEM via its portfolio of low emission, fast-response, reliable, flexible generating plant and energy storage, and through its award-winning Retail brands, which are key advantages in the C&I segment.^{3,4} Annual electricity demand in Snowy Hydro's core markets is declining as shown below:

³ <https://www.redenergy.com.au/awards-and-recognition/>

⁴ <https://www.lumoenergy.com.au/about-us/awards/>

Figure 3: NSW 10 year trend of annual electricity consumption

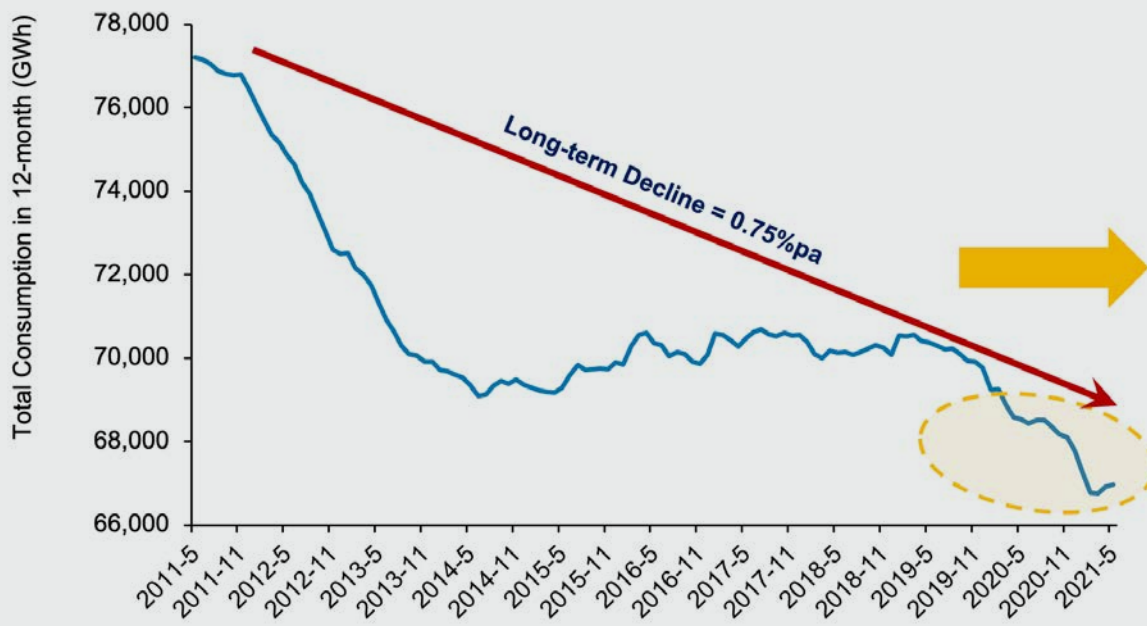


Figure 4: NSW 12 month trend of annual electricity consumption

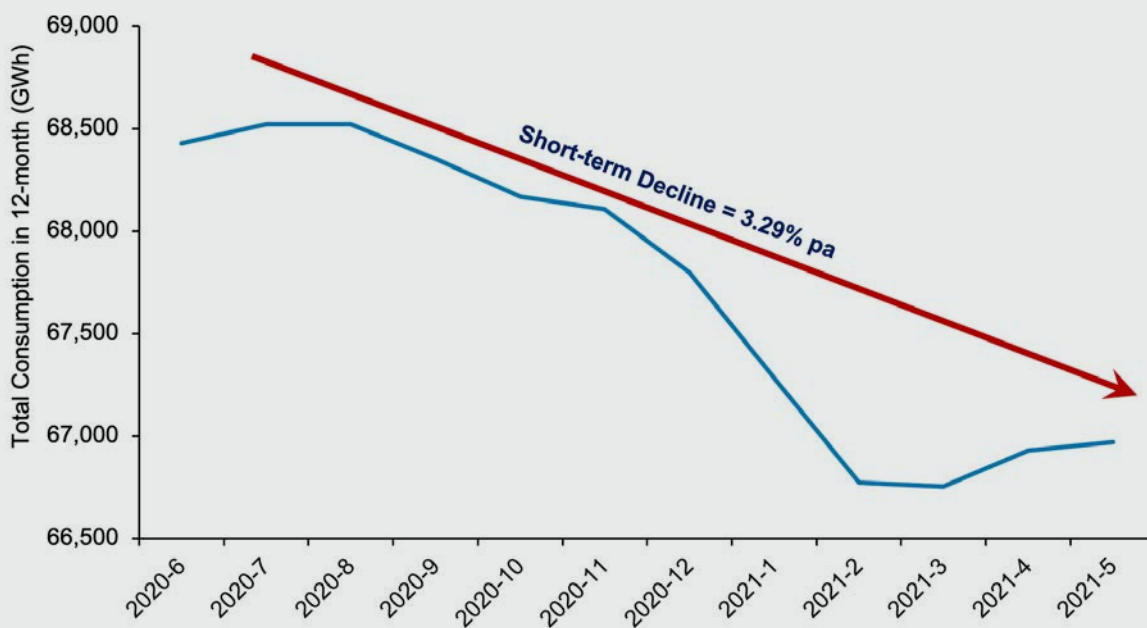


Figure 5: Victoria 10 year trend of annual electricity consumption

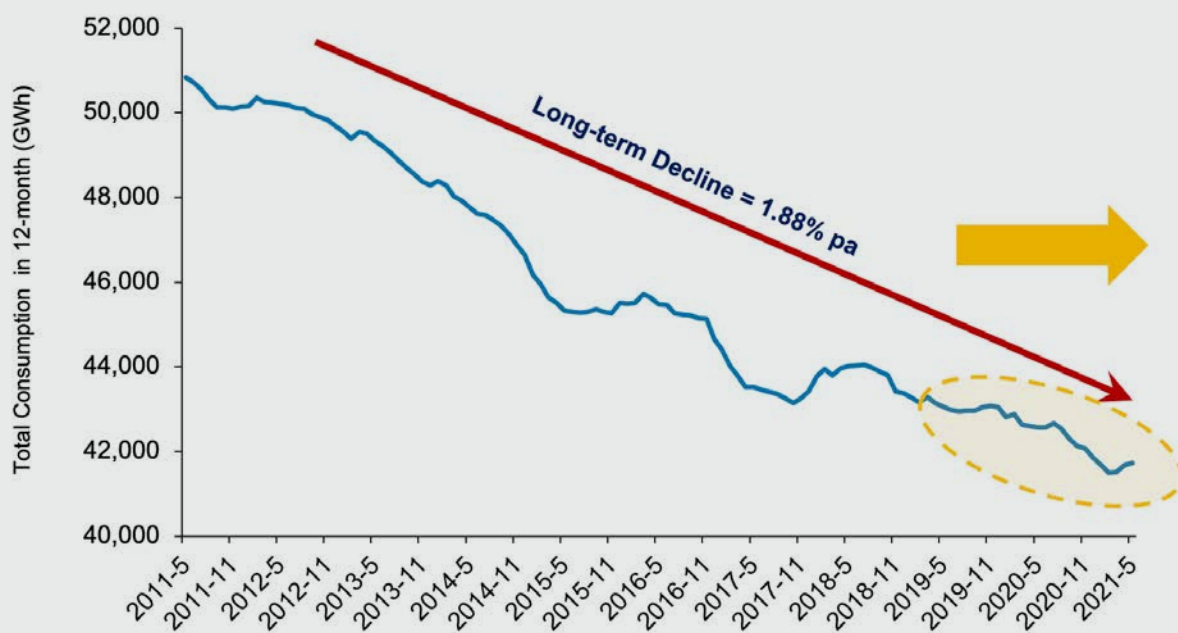
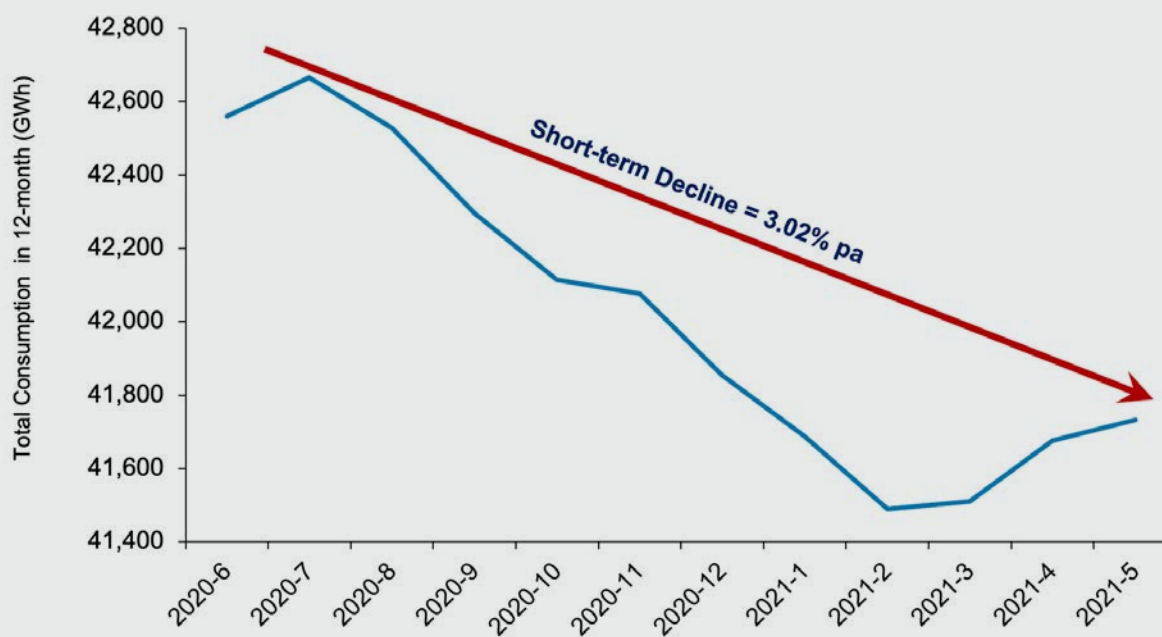


Figure 6: Victoria 12 month trend of annual electricity consumption



Total scheduled generation declined significantly over the previous 12 months with a decrease of 4.8% over FY21 (June 2020 – May 2021 inclusive). This compares to a 5.3% drop in FY20. Total intermittent generation increased by 22.8% for FY21 on top of a 34.9% increase in FY20. These changes are driving fundamental shifts in how the NEM operates, with greater volatility, more frequent cycling, and higher ramping requirements.

Figure 7: NEM total and scheduled generation

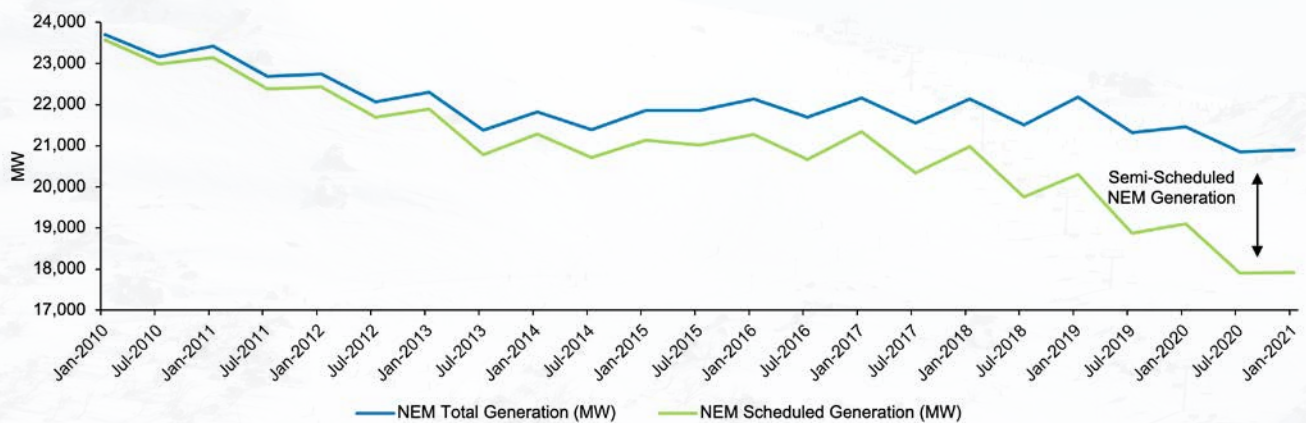


Figure 8: NSW coal availability duration curve

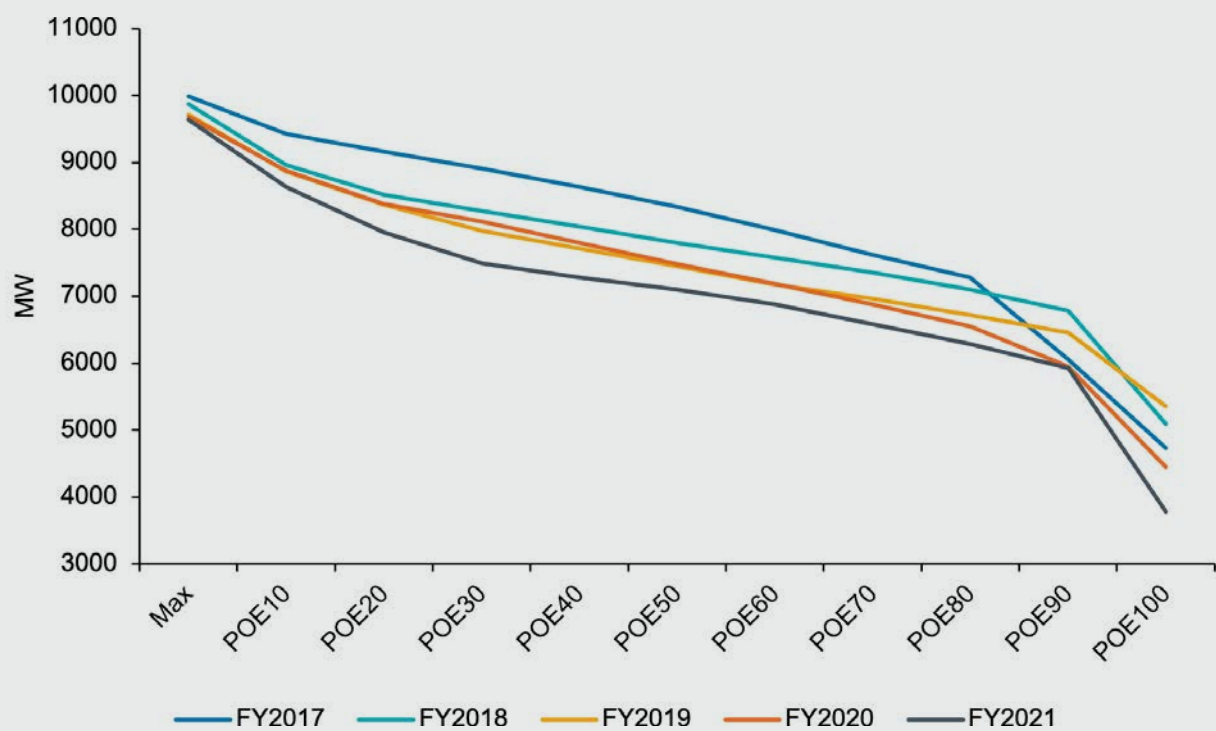
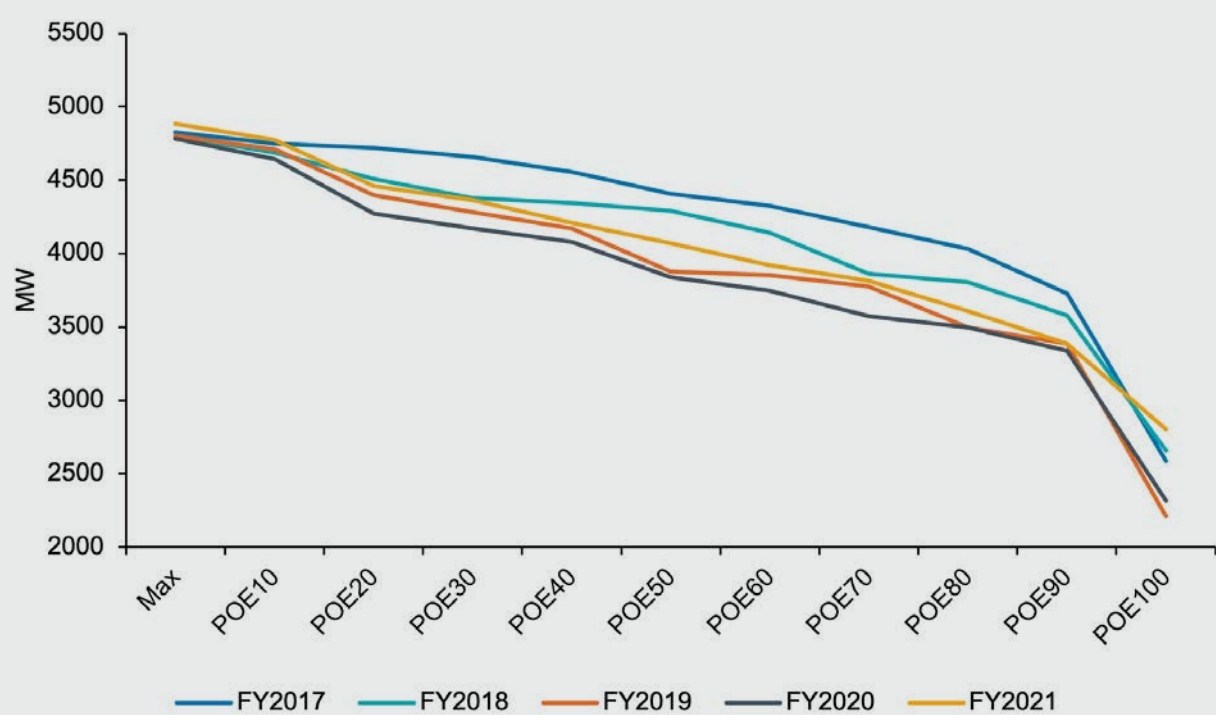


Figure 9: Victoria coal availability duration curve



The increase in semi-scheduled generation is impacting the existing coal fleet with deteriorating coal-fired generator reliability and increasing retirements. Figure 5 graphs the Probability of Exceedance (PoE) of megawatts dispatched from coal-fired generation in Victoria and NSW, which has deteriorated over the past four financial years.

Intermittent generation cannot replace the existing coal fleet and meet the NEM energy security requirements without firming. Wind and solar generation is cheap and output is highly correlated but not to load peaks, implying a need for large, long-term storage.

The Company's power generation assets have experienced a major change in utilisation patterns as a result of the renewable transition, with a 50% increase in unit starts over the past five years. This increased 'wear and tear' requires capital investment to ensure Snowy Hydro maintains the requisite reliability and capability to service the NEM.

The accelerated pace of the NEM's renewable transition improves the long-term outlook for the Company but comes with challenges. Snowy 2.0's economics improve and the need for the Hunter Power Project grows, however the increased expenditure on assets due to wear and tear, combined with the new-build capital expenditure and non-discretionary bushfire costs, all place short-term pressure on Snowy Hydro's balance sheet. This is exacerbated by the revenue impact of the events of recent years including tighter retail margins and lower wholesale prices.

Transmission

The need for additional transmission capacity to connect new renewable (wind and solar) power stations to load centres became more evident in FY21. The volume of renewable plants to begin operating in FY21 was 1,400MW in NSW and 1,200MW in Victoria.

These plants have caused transmission constraints around the Wagga region as they compete for limited transmission access. The transmission constraints in the Wagga region have been subject to severe congestion for over 500 hours since the start of January 2021, which represents a material volume of curtailment for renewable power generation in the region. This is an issue that is growing in intensity each year and with each new renewable generation installation that is not accompanied by a significant transmission upgrade.

Transmission constraints are attracting the attention of debt and equity capital providers. Constraints directly and negatively affect a generator's cash flows with no offsetting reduction in operating costs and therefore economic returns.

Retail key drivers

The Retail business experienced higher mass-market electricity and gas consumption, particularly in Victoria, with the effect of extended lockdowns through the 2020 winter and increased numbers of customers working from home. This more than offset slower customer growth, disrupted by COVID-19 restrictions on some sales channels, door-to-door and kiosk activity. Strong residential usage also neutralised the effects of unexpectedly strong growth in residential rooftop solar, which impacts retail sales of electricity and wholesale purchases required.

Regulatory restrictions to usual credit collection practices by energy retailers throughout the year saw an increase in the cost of bad and doubtful debts. Cost savings, however, remained a focus and average Cost to Serve overall improved on the prior year. Costs of acquiring new customers were also lower in sales channels affected by COVID-19 restrictions.



snowyhydro
renewable energy
Jounama Small Hydro



THE FUTURE OF THE NATIONAL ELECTRICITY MARKET

The existing power generation infrastructure is inefficient and diminishing with the transition to renewable energy sources. The evolution of Australia's power generation will rely on Snowy Hydro's inherent strengths and growth opportunities in large-scale energy storage, firming products and peaking generation.

The basic design of the NEM was formulated around the intention to use spot price volatility as a signal of the need for new entry. This has enabled all NEM participants to calibrate their spot and contract exposures according to their risk thresholds, and to delay the new build of power stations until that market entry was optimal. Unnecessary regulation that is not agnostic to the generating fuel or to the NEM participant's risk tolerance creates a disconnect between economic investment (a lot of it already 'sunk') and the required returns.

Snowy Hydro's FY21 objective was to offer competitive renewable energy products to price-sensitive C&I customers through its inherent strengths combined with recent lowest-cost renewable energy purchases. This customer segment is populated by organisations with sophisticated electricity procurement, normally supported by external advisers. For Snowy Hydro to thrive in this competitive segment during FY22, it must continue to offer innovative, competitively-priced products. More generally, the Company must sell similarly bespoke products to other segments and customers over the coming years.

The NEM's Energy Transition

Australia's power generation infrastructure is the largest greenhouse gas-emitting industry, contributing a third of total domestic emissions. It is also the cheapest and easiest sector to achieve substantial emissions abatement through the uptake of renewable forms of power generation, underpinned by Australia's abundant, high-quality wind and solar resources. Any scenario with significant decarbonisation of the Australian economy will require the power generation sector to make a leading contribution.

Driven by rapid global growth, the cost of wind and solar generation has progressively declined, reaching the tipping point of price parity between coal and renewables in the NEM, resulting in rapidly increasing consumer demand for now-affordable renewable energy products. These trends resulted in a record amount of small and large-scale renewable generation being installed in the NEM during calendar year 2019. Further, Snowy Hydro's cheapest and least-risk source of commodity energy is via offtakes with solar and wind farms. The intermittent energy thus procured is transformed into saleable (firm) products using Snowy Hydro's combined asset portfolio and associated risk management systems.

In recent years, stronger renewable energy targets were passed into law in Victoria and Queensland, requiring a 50% contribution from renewable sources by 2030 in both states; Tasmania announced an aspirational target of 200%⁵ renewable energy by 2040; the NSW Roadmap was legislated setting targets of 12GW of new renewables and 2GW of storages by 2030. Together with policies supporting the adoption of renewable forms of electricity production, these changes will contribute to a doubling of the market share of renewable generation in the NEM over the next decade.

Peak vs off-peak demand patterns in energy usage in the NEM over the Plan Period are expected to be volatile to the point that the traditional definitions of 'peak' and 'off-peak' have become essentially redundant. In particular, the NEM's definition of the 'peak' period will no longer be relevant as it includes the midday demand trough.

In an anticipated environment of at-best minimal NEM energy demand growth over the Plan Period, each market share increase of renewable energy production will create a cycle of diminished production and greater wear and tear, and hence higher energy production costs for coal-fired generators. This accelerated decline in the reliability of the coal-fired plant and the timing of their retirement creates attractive market conditions for further renewable generation.

Increasing renewable penetration requires investment in three key areas:

1. Transmission infrastructure;
2. Ensuring system security is maintained, including additional flexible peaking generation;
3. Additional energy storage, primarily in the form of pumped hydro (longer-term) and batteries (shorter-term); and
4. Open-cycle gas-fired power plants.

These are required to reliably balance increasing amounts of uncertain and variable renewable energy production with patterns of consumer demand, which do not match renewable production patterns, and to reduce curtailment of renewable energy production and deliver emissions reduction in the NEM at least-cost.

Competition in the NEM

Falling domestic gas and coal prices from a combination of global oversupply of oil and COVID-19's destruction of energy demand, together with the renewable projects under construction and the expected growth of rooftop PV in the NEM, placed strong downward pressure on NEM prices during FY21. This financial year has challenged many long-held assumptions for investors in the NEM; the share price and shareholder registers of AGL and Origin Energy demonstrate the paradigm shift. Not only are capital providers shunning coal on an emissions basis, but also on competitiveness grounds.

The short-term forward curves for wholesale electricity predict dampened pricing for the next three years where some market liquidity exists.

⁵ Tasmania has an aspiration to produce 100% more energy than it consumes, and the 'surplus' to be entirely produced from renewable sources in Tasmania. The surplus must also be exported, likely in the form of electricity to Victoria or possibly shipped in the form of liquid hydrogen.

BUSINESS ENVIRONMENT

Renewable Energy Targets in their various forms are reshaping power generation demand. Coupled with an overall transition in Australia's economy towards lower emissions and disruption for coal-fired generation, this is playing to Snowy Hydro's strengths in energy storage and flexible generation. The NEM's transition presents Snowy Hydro with substantial and long-term growth opportunities in wholesale and retail markets.

The impact of climate and weather provide risks to infrastructure, supply and demand volatility, but the Company's ongoing efforts in diversification and leading-edge technologies place the Company in a robust position to increase value.

Focusing on customer requirements and preferences in this environment and delivering value-based decisions creates the platform for success.

Energy and climate policy and regulation

As the nation continues to decarbonise the energy sector, there continues to be future emissions reductions in the NEM, with numerous legislated state and territory renewable energy targets extending out to 2030 and beyond. The Federal Government's Technology Investment Road Map Discussion Paper and the findings of the King Report support Snowy Hydro's long-term portfolio and corporate strategy strengths.

The Government papers acknowledge that decarbonising the energy market requires generating capacity supplied by increased renewable generation, storage and, for a least-cost solution, supporting gas generation. Snowy Hydro sits at the heart of that progress.

States continue to introduce their own emissions reduction or renewable energy targets.

The previously legislated VRET continues to underpin expansive investment in variable renewable energy in Victoria and expects to facilitate 16GW of network capacity in the nominated REZs.

Albeit using a different structure to Victoria, the NSW Government has recently legislated new targets for renewables capacity and storage and has begun announcing financial incentives for early-stage investments. NSW has a legislated ambition to enable an additional 12GW of large-scale renewables by 2030.

The picture appears less certain in Queensland; whether the non-legislated QRET will be met via policy initiatives and whether generation owners will close coal-fired generation ahead of technical asset lives remain open questions, which must be done while maintaining system strength for consumers.

SA exceeded the original target of 26% renewables by 2020 and is firmly committing to meeting or exceeding the 75% target by 2025, perhaps meeting the 100% target originally set for 2030, in 2025.

With these disparate approaches to targets, the Company continues to put forward a strong fact-based argument directly to key influencers to help achieve the desired policy outcomes. This is particularly important on issues where stakeholders across the sector have differing views and vested interests. The Company is well represented and

respected in the peak sector bodies – for example being a member of the Australian Energy Council (AEC), Clean Energy Council (CEC) and the Business Council of Australia (BCA) – and pro-actively participates in policy and regulatory working groups.

The Company has a proactive and strategic approach to addressing regulatory and policy risks based on building targeted and timely relationships with key government, regulatory and industry stakeholders. Community, regulators, Governments, customers and other influential stakeholders have a heightened awareness of and interest in the behaviour of energy industry participants.

Wholesale Energy Markets

Investment in wholesale generation facilities, new and old, is facing up to unprecedented challenges while contemporaneously positioning to capitalise for opportunity.

The large-scale renewable sector contributed nearly 2GW of new capacity in calendar 2020 from the 32 projects completed around the country. The majority were large-scale wind and solar farms. AEMO's 2020 ISP forecasts more than 26GW of new variable renewable energy is needed to replace coal-fired generation.

Large-scale renewable projects are facing cost and net revenue uncertainty along with a changing risk profile related to grid connection technical requirements, marginal transmission loss factors and COVID-19 impacts on supply chains. The recent record installation rates are considered unlikely to be replicated in the short term, however, that would need to reverse in the medium term to meet the aforementioned targets.

With the macro picture set, the sector and its capital providers must focus on what is required for further expansion in large-scale renewable energy development. Decisions on technology selection and contracting structures matched to customer preferences and regulatory reform outcomes are key determinants to success. Debt and equity investors with appropriate financing structures can then complete their contribution to meeting the overall challenge.

Snowy Hydro's commitment is to apply its portfolio of on-demand reliable generating assets to firm up

demonstrated by the largest ever one-off renewable energy procurement programme that yielded 1GW of new renewables in the VIC/NSW markets.

Further investment in the existing generation portfolio, Snowy 2.0 and the Hunter Power Project strengthens the future portfolio's capability to meet the growing demand for firming and energy storage services and products. Investing in core assets is a key tenet in Snowy Hydro's history and reputation.

AGL plans to retire Liddell Power Station in 2022/23 and Torrens A Power Station over a two-year period which commenced September 2020. Energy Australia has announced plans for retirement of Yallourn Power Station commencing in mid-2028 and the loss of energy market share resulting from the expected substantial growth of renewable generation in the NEM over the next five years. The potential exists for the closure of one or more of the NEM's remaining aluminium smelters within the Plan Period, given all face renewal of their electricity supply contracts this decade, and if so would accelerate coal-fired generator retirements.

Transmission investment to meet the fit-for-current-purpose requirements, and invest for the future.

2021 was also a watershed year in the history of the development of the NEM's transmission infrastructure, with major new transmission links reaching significant milestones towards their construction. This paves the way for greater interconnection between the mainland NEM states and a surge in renewable project developments over the Plan Period. A new major interconnection between SA and NSW (Project EnergyConnect) received financial close and is planned for completion in 2022/23.

An upgrade of the Queensland to NSW interconnector (QNI Upgrade) also received AER approval and has been fast-tracked with the support of the Federal and NSW Governments for completion in Q3 of calendar year 2021.

A major new inter-regional transmission link (HumeLink) connecting Sydney to Project EnergyConnect and the Snowy region commenced the regulatory investment test process. AEMO awarded a construction contract for an upgrade to Western Victoria's transmission network, required to accommodate up to 6,000MW of proposed new

wind and solar farms in Western Victoria in the next decade, and the Victorian government announced plans to accelerate an upgrade to the Victoria to NSW transmission network.

A proposed new submarine cable transmission link between Tasmania and Victoria (Marinus Link) is also progressing through the transmission investment test process.

Fuel price impacts and outlook

Falling fuel prices due to global oversupply of oil, which affects wholesale gas prices, demand destruction from COVID-19, mild summer weather conditions, high baseload availability comparative to demand, renewable projects reaching commissioning and the continued growth of rooftop PV have acted to place strong downward pressure on wholesale electricity prices. The continuation of some factors is inevitable and predictable, some are not.

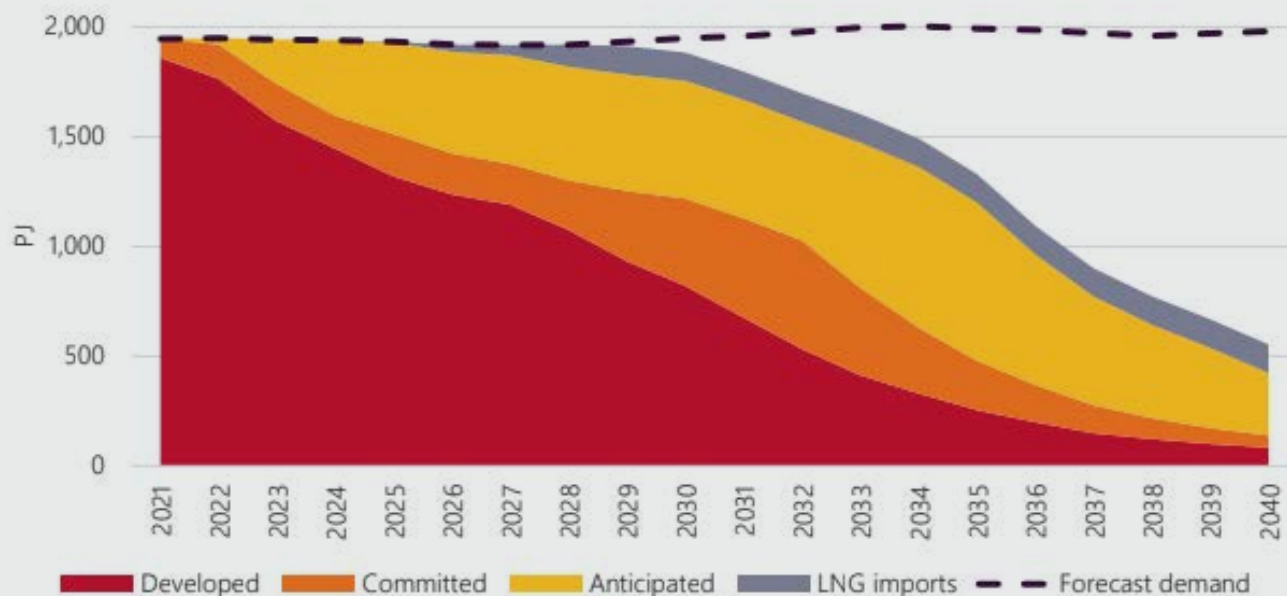
Upward price pressures, particularly from the recent oil recovery, will return due to a number of trends. First, the commodity fuel markets will rebalance supply and demand and translate into higher gas and coal costs for the NEM's thermal generators, and second from the declining reliability and increasing maintenance costs of thermal generation and thermal generator retirements.

In line with the Gas Statement of Opportunities (GSOO) from AEMO, the Company's investigations and advice show the market for wholesale gas in Australia is facing three distinct periods:

1. **2020-2023:** Balanced or oversupplied domestic supply and demand;
2. **2024-2028:** Transition with reliance upon LNG imports (two terminals are needed);
3. **2029-2037:** Shortfall with decline in Queensland CSG fields (already observable), including LNG import and contingent resources such as Narrabri and Beetaloo. Rebalancing in this timeframe is needed.

Pricing in the 'Balanced' phase is likely determined by the production cost of existing production assets, while pricing in the 'Transition' phase is increasingly determined by a mix of cost of production, oil driven LNG netback from Queensland and LNG import over the peaking winter periods. The most interesting phase for pricing will be in the 'Shortfall' period,

Figure 10: Global gas supply and demand forecasts



which is likely to be determined by a mix of LNG import and LNG netback from Queensland.

Like other major wholesale gas-market participants, the Company will occasionally seek to purchase long-term wholesale gas with major creditworthy counterparties, each offering contract terms bespoke to their portfolios.

The Company's views around regulations and the ESB post-2025 reform agenda are based on a preference for long-term market-based solutions allowing market participants to respond to price signals in the spot market, resulting in the best and most economical solutions for market participants and consumers. The Company will continue to highlight that the impact of any new market needs to be carefully considered to avoid unintended consequences, taking into account costs and benefits risks. Snowy Hydro will follow the correct and transparent process by participating in consultations, forums and undertaking submissions noting our concerns.

Retail Energy Markets

FY21 was the second year of reinstated retail price regulation, triggered by elevated electricity prices for customers who did not actively engage in the market and the challenges that customers faced in comparing offers due to the variety of conditional and unconditional discounts offered by a wide range of retailers in the market. Retail electricity prices were re-regulated in July 2019 across the markets where the Company operates, with additional marketing and product restrictions introduced.

The Default Market Offer (DMO) benchmarks outside Victoria are intended to sustain a competitive retail market, capping the maximum prices paid and providing a common benchmark price against which discounts must be disclosed. Originally based on observed competitive market prices, the DMO benchmarks are being adjusted subsequently by the regulator's view of changes in key cost components: a process fraught with difficulty.

The Australian Energy Regulator (AER) underestimated changes in network costs in its FY21 determinations and declined submissions by retailers to provide additional allowances for higher bad and doubtful debts driven by COVID-19 and the

AER's own restrictions on retailers' normal credit collection processes. It has declined to adjust the DMO benchmarks for the rising costs of contestable metering incurred by retailers as they assume responsibility for metering from network business under the Power of Choice reforms and incur these costs directly rather than through network charges. By announcing DMO reductions for NSW in July 2020, Red Energy was left to absorb increases in these costs and foresees a further squeeze in profit margins in FY22 under the latest DMO determination for similar reasons.

In Victoria, the regulated price (VDO) is not a hard price cap but must be offered as a 'fair price' to customers if a retailer does not have a better generally available offer. Thus, the onus is on retailers to deliver additional value to customers to sustain any pricing above the VDO. So far, the pricing of the VDO has not interfered with the competitive market; however, it risks constraining retailers' long-term profitability and reducing the incentive for customers to engage in the competitive market.

Despite this, the Essential Services Commission (ESC) is implementing a range of new additional restrictive regulations on price changes, including limiting price increases to a single day per year increasing risks for retailers in managing retail margins. Ironically the ESC struggled with its own timetable for announcement of the latest VDO, choosing to defer its decision by two months to 1 September.

Meanwhile, the AER is shifting network price regulation in Victoria from calendar to financial years. Managing this change has been further complicated by the AER endorsing a change in Victorian residential time of use tariff structures⁶, allowing networks to implement them retrospectively from 1 July, while retailers are expected to notify price changes to customers in advance and advise them of the cost impact and whether they're on the best available offer.

The Victorian Government has also recently passed a Bill in the Lower House for its Energy Fairness Plan, which will, amongst other things, ban door-to-door sales, outbound calling and retention activity, and impose increased fines on retailers under various circumstances.

None of these changes are conducive to maintaining healthy competition and creates a challenging environment in which to grow and manage retail margin.

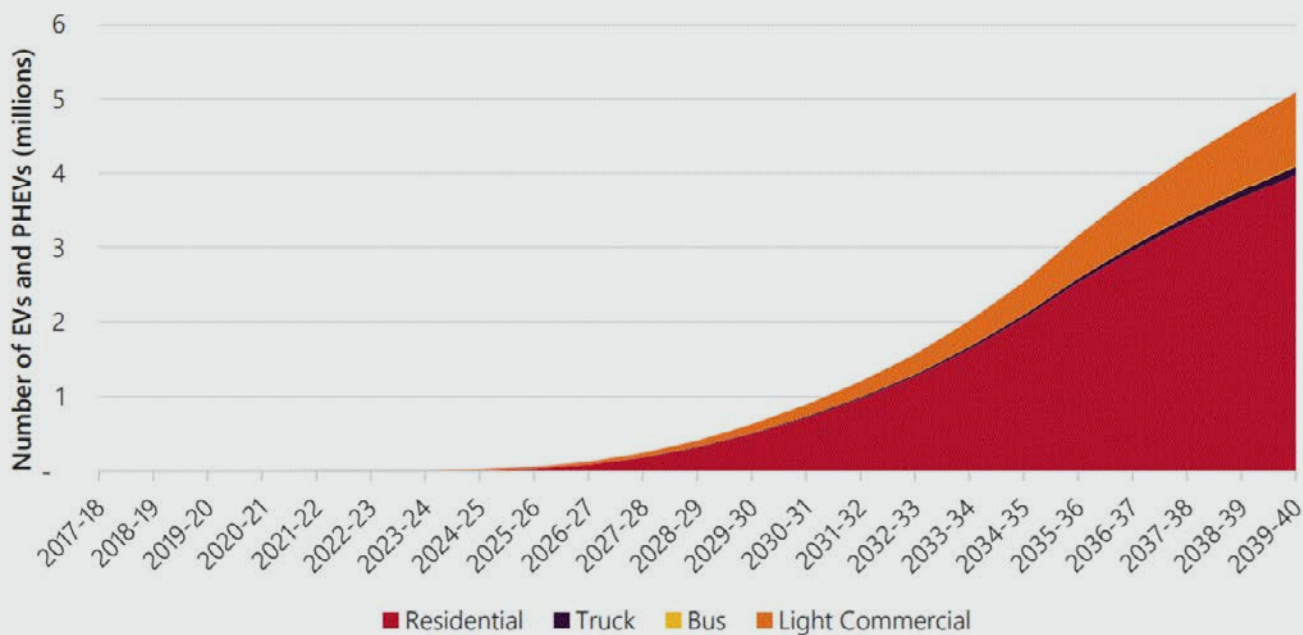
Low customer churn, relative to historical rates, on the back of price re-regulation is expected to continue as customer savings through switching become less enticing. This is a positive market trend and a benefit to incumbents and the larger established retailers, including Red and Lumo.

Margin pressures are expected to continue from declining household electricity usage. Retail load forecasts have been cut by growing penetration rates of residential solar. In SA and Queensland, more than a third of households have installed a PV system and is forecast to surpass 40% by late 2022 in SA and by 2025 in Queensland. Victoria and NSW have seen a lower historical uptake, but a record year of installation in 2020 saw penetration reach 20%, well up on expectations while the average size of new installations is growing.

State and Federal subsidies and high Feed-in Tariffs have been the engine behind the growth of solar uptake. Such subsidies and an increasing share of network costs are increasingly being funded by less advantaged customers who do not own their property on which to install solar. While Government subsidies look set to continue over the next decade, Feed-in Tariffs should significantly reduce in line with wholesale market prices and have a dampening effect on the rate of uptake of solar. Victoria and NSW are forecast to reach 25% penetration by 2030.

Solar installation reduces a retailer's sales of energy to the customer and requires the retailer to purchase excess generation from the customer and use it to offset other customers' electricity usage, resulting in fewer energy purchases from the wholesale market. Snowy Hydro's retail business is projected to more than double its solar energy purchases from customers from around 0.5TWh in 2021 to over 1.1TWh in 2031. It also has implications for the retail load profile, lowering average load while peaks remain unchanged, raising the average cost

Figure 11: Historic and projected electric vehicle sales under the AEMO Central Case



of hedging. Given the rate of uptake of solar, it is expected that by 2030, operational residential demand across all jurisdictions will be negative during the peak solar hours of noon to 2 pm.

A second significant trend identified for the Plan Period is the expected growth of electric vehicles (EV). The range of EV models is rapidly expanding as are commitments to investment in development and production capability by global vehicle manufacturers. Battery costs are also falling, contributing to an exponential growth of EV sales globally, albeit off a low base. EV sales are forecast to grow exponentially over the next decade and the charging of those vehicles is expected to occur principally at home. This will result in material changes to residential electricity consumption from mid-decade when the showroom price of EVs is expected to match those of internal combustion engine cars.

Retail gas markets have escaped the degree of price regulation imposed on electricity, but the threat remains, particularly in Victoria where it is an important household fuel for heating. Retail gas margins will likely tighten as the large gas players seek to head off regulation and look to minimise demand destruction from high prices and inter-fuel competition.

Climate and Weather

The key physical impacts from climate change are Snowy Scheme inflows, NEM demand and volatility, and transmission and bushfire risk.

Climate and runoff projections in the Snowy Mountains point to annual Scheme inflows trending below the long-term historical average and increasingly variable. Operation of the Scheme under the Snowy Water Licence will mean the Scheme is at low storage levels more frequently and will become more reliant on inflows rather than storage to meet Scheme release targets. The accumulation of above-target water will also reduce, limiting Snowy Hydro's ability to release more than the required annual release targets in times of high energy demand.

These trends will not impede pumped-hydro storage operation at Tumut 3 or Snowy 2.0, because pumped-storage operation recycles, rather than 'consumes', water. In fact, expected changes to the broader NEM make the Company's energy storage assets even more valuable.

An increase in the frequency and magnitude of extreme precipitation events risks more extreme flood events. This presents increased physical risks primarily to Snowy Scheme infrastructure and operations, notably the Scheme's dam structures. Flood risks to dams are addressed through the Company's Dam Safety Management Program and ensures that Snowy Hydro's dams are capable of safely managing future extreme inflow scenarios in accordance with dam safety regulatory requirements.

Warmer average and more extreme summer temperatures would drive higher maximum electricity demand and volatility and decrease the capacity or reliability of generators and electricity transmission and networks. On balance, these trends are a benefit to the Company's price risk hedging business. Warmer winters would reduce

the winter average and maximum electricity and gas demand over the long term, with only marginally negative impacts on revenues over the Plan Period, noting such impacts will not be discernible from the earnings volatility typically arising from weather-driven demand volatility.

The risk of bushfires impacting or damaging the Company's physical assets' operation is well understood by the Company and is the basis of the mitigation strategies pursued by Snowy Hydro.

The location-diversification benefits of Snowy Hydro's gas turbine plant will increase, again demonstrated during the January 2020 bushfire event when the Colongra Power Station operated to reduce portfolio losses when Snowy Scheme generation was disconnected from the market for a number of hours. Towards the end of FY21, Colongra was again called upon to generate when the cold winter temperatures hit the major load centres and coincidentally the prolonged impacts of a significant event that occurred at Callide C in Queensland were still being felt.

Water operations

The operation of the Snowy Scheme is prescribed under the Snowy Water Licence (the Licence) administered by the NSW Government. The Licence regulates how water is used in the Snowy Scheme and imposes a number of obligations on Snowy Hydro. It also sets out water accounting and reporting procedures for Snowy Hydro.

Snowy Hydro does not own any water within the Snowy Scheme. The Licence allows Snowy Hydro to collect, divert, store and release water in the Snowy Catchment Area.

It also obliges Snowy Hydro to carry out certain minimum water releases each year to the Murray and Murrumbidgee Rivers, and environmental releases to the Snowy and Montane Rivers.



OUR GENERATION BUSINESS

Through the development of our suite of firming products, Snowy Hydro will enable the sale of cost-effective, firmed renewable energy to retail, commencing with C&I customers. Capacity contracts will remain a major contributor to Company value.

The Company's directly-contracted electricity customer load in NSW and Victoria will total around 7.5TWh per annum at the start of the Plan Period, significantly exceeding the average generation of approximately 4.3TWh per annum. Snowy Hydro is ideally placed to offer renewable energy products that C&I customers are increasingly demanding, supplementing Scheme energy production with energy purchased through contracted offtakes from wind and solar farms.

Traditionally, capacity product option premiums have been Snowy Hydro's most stable revenue source, delivering much of the economic value while managing a significant amount of risk for customers. However, as the NEM transitions, Snowy Hydro is evolving to deliver products requested by its diversified customer base. Snowy Hydro's portfolio of physical assets and existing derivatives book positions it to be a market leader, combining capacity, energy, and storage product components to create firming products and services for intermittent renewable generation sources. Snowy Hydro can provide highly reliable dispatchable capacity and flexibility amongst its portfolio, matching the intermittent requirements inherent in firming products.

Firming products are a combination of energy – supplied through wind and solar offtakes – and capacity – supplied through Snowy Hydro's hydro and thermal generating fleet.

Capacity contracts (caps) are a major contributor to Company value. These contracts are backed by Snowy Hydro's energy generation in NSW, Victoria and SA, utilising generating capacity not allocated to the Company's retail customers.

Some of the capacity will be placed into new product lines formed by the Company and market players, such as the recently developed 'Super Peak' capacity contract covering only the winter morning and evenings and summer late afternoons to fill demands left uncovered when solar generation is absent or low.

Commercial and industrial customers

Following the contracting of 1GW of renewable generation in 2019, Snowy Hydro has successfully marketed and sold new 'firmed' renewable energy products to customers, which provide an attractive alternative to long-term market price risk, while lifting environmental performance to meet growing expectations of shareholders and other stakeholders. These firmed renewable products deliver longer-than-usual contract tenure and strong wholesale (energy, capacity and storage) value.

The Snowy Hydro C&I team's outstanding customer experience and ability to develop long-term, value-adding relationships with C&I customers has led the market (for five consecutive years) in customer satisfaction, achieving unprecedented scores of 100% satisfied and highly satisfied in calendar years 2015, 2017, 2018 and 2019 (and 92% in calendar year 2016) in independent customer satisfaction surveys. This has enabled the Company to retain C&I customers at higher margins, reflecting the value customers place on superior service.

Energy sourcing

The directly-contracted electricity customer load (residential, SME and C&I) in NSW and Victoria will total around 7.5TWh per annum at the start of the Plan Period, significantly exceeding the approximately 4TWh of long-term annual average energy production from the Snowy Scheme. Directly-contracted load is forecast to increase over the Plan Period as the retail growth strategy is executed. To meet these needs, Snowy Hydro is supplementing Scheme energy production with energy purchased through contracted offtakes from wind and solar farms in NSW and Victoria.

Additional renewable energy purchases may be necessary to support the ongoing growth in contracted retail customer load over the Plan Period. The quantum and timing of these additional purchases depends on a range of factors, including the achieved and forecast level of retail load growth and the availability of suitably priced renewable energy offtake contracts.



Development initiatives

As NEM decarbonisation gathers pace, Snowy Hydro looks forward to the completion of two major enablers of this process. Snowy 2.0 and the Hunter Power Project are both progressing as planned, and will play different but complementary roles in ensuring least-cost, reliable energy supply in the NEM of the future.

Snowy 2.0 will benefit from a far greater penetration of renewables than was contemplated at the time of the Final Investment Decision ("FID") in December 2018. Equally, its role in supporting grid stability and reliability, and in offering large, long-duration storage for excess electricity produced by renewables is expected to be more critical than projected at FID.

The Hunter Power Project has also passed several important milestones. Snowy Hydro continues to believe that the Hunter Power Project will play a key role in filling in the gaps for renewable production in NSW and will assist in ensuring NEM reliability at times of peak demand in the NEM environment expected to prevail in 2024 onwards.

Transmission

ISP 2020 captures various updates since the inaugural ISP (2018), including the Pumped Storage Insights noted in the previous Plan. ISP 2020 incorporates significant updated inputs, assumptions and scenarios based on current and forecast economic and market developments.

This was prior to COVID-19.

At the time of writing this Plan, AEMO was considering the implications for the final ISP analysis due to COVID-19. ISP 2022 may include changes to the transmission and energy storage mix projections relative to the previous ISP draft and insights analysis and may result in changed assumptions and scenarios for Snowy Hydro in relation to future transmission developments in the NEM.

In terms of the sensitivity to the Snowy 2.0 business case, HumeLink remains the single-most-important transmission development for the renewable sector in the NEM and for Snowy 2.0. HumeLink must be in place as soon as possible to match the commissioning for Snowy 2.0.

A similar issue is also possible on the link south. The plans of AEMO and transmission network providers to develop a new major transmission interconnection between Victoria and NSW/Snowy 2.0 (VNI-West) contemplate a delivery timeframe beyond the commissioning of Snowy 2.0. The 2020 ISP recommended VNI West should be progressed for completion as soon as practicable.

VNI West must accelerate to facilitate system security and support the cost-effective growth of large-scale renewable generation in Victoria and NSW, and be ready for the commissioning of Snowy 2.0.

The Company will continue to advocate to Ausnet, TransGrid, AEMO and stakeholders that VNI-West must be accelerated to match the timing of Snowy 2.0 coming online.

To address congestion risk along the existing main transmission path between western Victoria and the main Sydney load centre, Snowy Hydro is proposing to AEMO and TransGrid that additional transmission works be undertaken between Bannaby and metropolitan Sydney to ensure sufficient access to NSW load centres for Victorian exports and southern NSW generation. Similar works are examined in TransGrid's NSW Transmission Annual Planning Report 2020.

The pace of transmission development in Victoria has increased considerably compared with the previous decade and other NEM states, with major new transmission projects arising from ISP outcomes and the broader renewable energy transition, and further accelerated by the Victorian Government's increased VRET, targeting 50% renewable energy by 2030.

As a direct result of the rapid uptake of renewables in Victoria, a significant transmission system weakness has been identified in the renewable resource-rich western region of Victoria (the West Murray Zone). This will require significant transmission system reinforcement to fully overcome. Fortunately, the planned transmission system developments required to address the long-term solution for the West Murray Zone, notably Project Energy Connect and VNI West, are at the time of writing, well-aligned from a capability perspective with the inter-regional



developments previously proposed to support Snowy 2.0.

Alternative approaches are available to accelerate transmission investment in HumeLink and VNI West. NSW and Victoria have the power to seek jurisdictional derogations from existing rules, either to deal with financeability issues, or more generally to alter the Regulatory Investment Test for Transmission (RIT-T) and both states have special purpose legislation that allows them to alter the RIT-T for priority projects. NSW legislation also allows for directions for 'priority' infrastructure projects to be built.

The Victorian Government legislation to facilitate and expedite certain transmission system augmentations or services to improve the reliability of electricity supply in Victoria could break delays associated with the National Electricity Law/National Electricity Regulations (NEL/NER) transmission RIT-T project approval process. The legislation empowers the Victorian Government to decide (in consultation with AEMO) and fast-track transmission system developments, including providing project funding outside of the RIT-T process.

The technical characteristics of the transmission infrastructure, its operation and associated

market rules are sources of market access risk for Snowy Hydro. The mal-operation or forced loss of transmission capability is a low probability but potentially high financial consequence event (transmission tail risk).

The Company's Colongra, Laverton and Valley Power gas-fired power stations provide critical transmission 'tail risk' diversification for Snowy Scheme generators, given their favourable location within the transmission network relative to the constraints impacting market access for Snowy Scheme generators. The benefits of this transmission risk mitigation are a key factor influencing locational decisions for future peaking generation developments.

The Hunter Power Project and transmission developments across NSW and north-western Victorian transmission networks have the potential for favourable and unfavourable impacts on transmission constraints and risks for NEM participants. While the Hunter Power Project will provide the firm and dispatchable capacity required by the future NSW network, it is unclear how Battery Energy Storage Systems (BESS), renewables and transmission investments will affect the NSW electricity system.

OUR RETAIL BUSINESS

Our purpose is to *bring energy to life for our customers* while delivering a return to our Shareholder.

In a market where price and product differentiation is challenging, brand value, innovation, trust and reputation are essential ingredients for customer growth. A focus on delivering exceptional customer experience, through a highly engaged workforce guided by our values, is the core and proven strategy to achieve this.

The Retail business adds value to Snowy Hydro by providing an important, stable channel to market for generation and capacity products, while delivering additional retail margins and helping to stabilise group earnings.

Value is delivered by growing a quality customer base, defined by customers who stay, pay and refer, along with an ongoing focus on three established pillars for success:

1. Delivering an exceptional customer experience to generate loyalty, referral business and a willingness to pay for value provided;
2. Maintaining a highly engaged workforce, living our values and delivering the exceptional customer experience the business strives for;
3. Growing the profitability of the business by growing market share, delivering shareholder value through the Retail EBITDA contribution, as well as providing earnings stability to Snowy Hydro through its purchase of wholesale electricity.

These long-established pillars have sustained the Company's retail growth since 2004 and remain as important during times of regulatory change and market disruption.

We will continue to enhance systems to increase customer choice in how they interact with us and invest in technology and automation to reduce cost to serve, driving productivity and efficiency gains from process enhancement and automation, freeing up people to engage with customers.

The Victoria and NSWs retail markets remain a core focus, aligned with the Company's integrated generation position. SA is also an attractive opportunity for growth, backed by Snowy Hydro's physical assets and renewable contracts and supported by EnergyConnect's strengthening of interconnection with NSW by 2023.

Queensland is a market that must sustain a profitable retail operation independently, with no integration benefits accruing to the Snowy Group. The regulatory environment has proved unpredictable and challenging, while retail competition has been intense. South-east Queensland is, however, the third-largest retail market in the NEM and offers the retail business an opportunity to secure scale benefits from customer growth and remains a live opportunity for Red Energy.

Regulated default prices will keep downward pressure on retail prices and margins over the Plan and is expected to constrain the level of competition and maintain the relatively low level of customer churn currently observed. Our investment in customer growth is guided by the changing dynamics of state regulations, shifting emphasis of marketing and customer acquisition efforts between states, regions and segments as profitability changes. Our response is to continue to invest in a suite of brands that offer flexibility with price, products and by market segment, while building brand awareness and consideration through a combination of above the line and digital advertising and selective sponsorships.

Building a diverse range of sales channels remains a core strategy to address the risks of regulatory interference in specific channels. The value of channel diversity was evident when field sales and kiosk operations were suspended due to COVID-19 for considerable periods, while new connections

and online sales channels flourished. Red Energy's partnership with Qantas Loyalty continues to deliver sales and customer growth largely through digital and electronic direct mail initiatives, with many members looking to accumulate points for spending on the ground, or in anticipation of a return to flying. The Qantas partnership is a model for the potential offered by development of other new partnerships.

We remain open to exploring loyalty benefits through partnerships rather than acting as a principal providing other services.

Electric vehicles

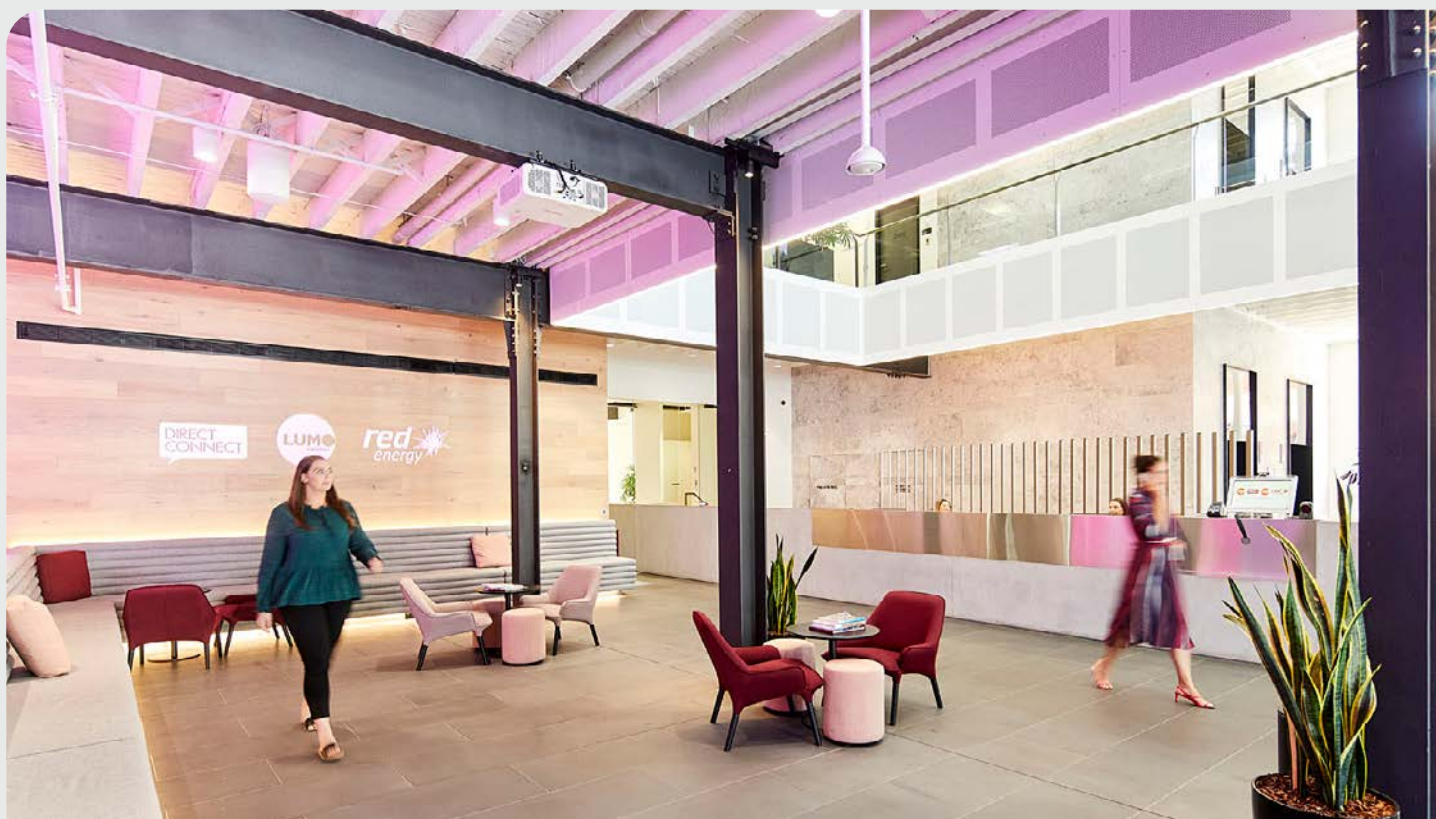
The uptake of EVs in Australia, based on infrastructure investment and vehicle costs, will provide a welcome reversal of a long trend of declining average household load.

The impact of a transition at scale to EVs would extend across the entire energy market in terms of energy consumption, load profile, changes to network tariffs, metering arrangements and importantly, innovation in retail products. We aim to maximise value from this emerging market and offer residential and commercial customers renewable EV charging, whether at home, work or in a public space.

Given the market infancy, this will require agility, partnerships and investment in technology. The business continues to build operational readiness, undertaking customer research and developing capability to position the Red Energy brand as a leader and innovator of products for EV owners.

Wholesale gas supply

The Company has maintained stable wholesale gas supply arrangements over a number of years, providing a risk-managed, reliable source of gas at reasonable prices, and recently extended them to December 2022. Gas costs remain uncertain, subject to upstream price reviews and linked to Brent crude oil futures prices. The Company has been using its short-term extension to undertake due diligence on alternative sources of supply and build capability to manage gas market and risk management operations in-house. Key to this has been the purchase of a separate supply of gas for sales into the C&I market, with forecasting and market interactions managed internally. The learnings from this endeavour have already borne benefits and materially improved the expected cost of supply of gas for the retail business from 2023 onwards.





OUR CAPABILITY

Snowy Hydro attracts highly agile, intellectually curious and intelligent problem-solvers. We pride ourselves on the agility and diversity of thought demonstrated by our workforce, and their ability to think 'outside the box' in identifying and delivering solutions that achieve the best outcomes for the Company and community.

Snowy Hydro's people are our greatest asset, and we are proud of our successful track record in maintaining and fostering a highly-skilled, diverse, professional and technical workforce. This is increasingly important in the face of a rapidly evolving industry and corporate environment, where innovation, dynamic capabilities and non-traditional approaches are critical to organisational success.

A robust corporate governance framework oversees the capability strategy. In particular, the Board People and Culture Committee provide advice to the Board on strategic priorities and risks of human resources to ensure the Company has the requisite capability to achieve its strategic goals and long-term success.

We conduct regular strategic workforce planning reviews to ensure we have the capacity and capability to achieve the long-term success of the Company in a highly complex and rapidly changing environment. Snowy Hydro also routinely augments our internal skillset through strategic supplier and service partnerships, specialist consultants and contractors.

Snowy 2.0 and the Hunter Power Project have reinforced the importance and ongoing need for our

pipeline of talent, as has the ability and agility of the Company's Retail executives to grow their capability over a 10-year period in alignment with the Retail growth strategy.

The Company has an excellent track record in its management of Snowy 2.0 and the Hunter Power Project. A robust governance and oversight framework has been established for these projects. This ensures that delivery capability risk is effectively managed, including aligning organisational structures with the evolving needs of each project, fit-for-purpose governance processes, and specialist external advisors with global megaproject experience to support the project team. Project management is overseen by a highly-skilled and diverse team that brings together Snowy Hydro staff and world-leading technical experts.

The continuing acquisition, retention and development of 'home-grown' talent will be critical given the demand for skills on Snowy 2.0 and the Hunter Power Project, volatile and uncertain energy policy settings and the emergence of automation, robotics and mobile technologies.

Snowy Hydro also proactively invests in our future capability through targeted apprenticeships, traineeships, cadetships and graduate programs with approximately 10% of our generation workforce in these programs. We engage with local students to encourage an interest in science, technology, engineering and mathematics (STEM)-oriented careers to build a sustainable local talent pipeline.

Snowy Hydro also provides ongoing career development opportunities to our workforce through promotions, transfers, secondments or involvement in projects and cross-functional teams to ensure we develop the right skills for the future.



ENVIRONMENTAL, SOCIAL AND CORPORATE GOVERNANCE STATEMENT

Executive Summary

Snowy Hydro is committed to Environmental, Social and Governance (**ESG**) principles. Our long-standing ESG commitment to communities where we operate is paramount and demonstrated through our actions and results. In addition, Snowy Hydro's involvement in the construction of wind and solar farms, and the invention and development of a new, environmentally-focused product class for C&I customers shows a broad and positive impact to the energy industry.

Snowy Hydro's performance over the last five years demonstrates minimal and minimised harm to the environment. This has been achieved through a culture of understanding evolving expectations and regulations and supported by a continuous improvement approach to our plant, operations and our people and processes.

We demonstrate our values in how we support our communities, customers and our people. The Company focuses primarily on the areas of education, health and young people in a regional context. It has partnerships in many worthy initiatives, including the support and employment of young Aboriginal and Torres Strait Islanders, a founding partner in establishing university education centres in regional environments, the creation of the NSW Health School wellbeing coordinator model, and supporting breast cancer patients.

As well as providing consumer protections under the AER and ESC regulations, the Retail business is continually reviewing existing policies and processes to identify improvement opportunities for our customers. This is evidenced by our multi-award-winning customer service and below-industry average for customer complaints.

We are dedicated to our people and their wellbeing and deliver on this commitment through various programs and assistance. We consciously create an engaged workforce that values safety, diversity, equal opportunity and is rewarded and recognised appropriately for their efforts.

Our dedicated governance framework provides the foundation for our success, ensuring the Company is effectively guided and supported in achieving a strategy that optimises shareholder value and meets the needs of a diverse set of stakeholders.

Environmental

Snowy Hydro is proud of the positive contribution it makes to the environment through its role as the biggest renewable generator by capacity in the NEM.

Our carbon emissions from generation operations are a fraction of those of our key competitors. We are committed to operating in a way that avoids harm to the environment where possible, and performance indicators over the last five years reflect that this is being achieved.

We have a 70-year record of care for the land, along with respectful stakeholder relationships. Snowy Hydro continues to work with the National Parks & Wildlife Service, Environmental Protection Authority and other regulators to maintain and evolve our standards. Together, these provide the foundation for delivering on our commitment and avoiding harm to the environment when conducting our work.

As Snowy Hydro evolves, we will continue to meet our high expectations for environmental performance wherever we operate. We understand that community and regulatory expectations for environmental performance change over time and we have consistently met or re-set those standards for the industry since our inception. Practically speaking, this means the impacts of our operations on land, air and water must meet increasingly high standards. Snowy Hydro relies on three 'pillars' to meet and continually improve these standards:

- **Our plant** – designed, built, operated and maintained to minimise impacts on the environment;
- **Our operations** – a business model that fundamentally minimises our environmental impacts; and
- **Our people and processes** – those with the skills and tools to control impacts where and when we operate supported by good environmental practice integrated into our business processes through an Environmental Management System.

Social – Community Support

The Company is committed to supporting the local communities where we live and work. Each year, Snowy Hydro invests in partnerships and sponsorships with not-for-profit organisations.



Further, we deliver on our long-standing commitment to the health and wellbeing of our people and their families through programs, health initiatives, injury management, emergency first response in our remote Snowy Mountains sites and our Employee Assistance Program.

Our commitment to our people is underpinned by robust diversity, workplace behaviour, code of conduct, reward and recognition, performance improvement and health and wellbeing policies and procedures.

Governance

Snowy Hydro is committed to achieving best practice corporate governance. Our corporate governance framework and practices have been developed with regard to the provisions of the *Corporations Act 2001*, the *Public Governance, Performance and Accountability 2013* and the ASX Corporate Governance Council's Principles and Recommendations.

Corporate governance at Snowy Hydro is underpinned by an independent, highly-experienced, skills-based Board supported by dedicated Board Committees who assist the Board in discharging their governance responsibilities. The Board is principally responsible for strategic oversight of Snowy Hydro, guiding its strategies and policies to optimise performance and create shareholder value, and ensuring that its business objectives are aligned with shareholder expectations.

The current Board comprises eight Non-Executive Directors and one Executive Director being the CEO and Managing Director, and reflects diversity of skills, experience, gender and geographic location. A brief summary of the qualifications and experience of each Director is available on Snowy Hydro's website and annual report.

The Board has established five Committees to assist the Board in discharging its responsibilities by overseeing risks pertaining to the Company's strategy and operations. This includes consideration

of environment-related risks and opportunities, which are increasingly important as Snowy Hydro underpins the National Electricity Market's renewable transition:

- **The Audit and Compliance Committee** – oversees risks relating to audit, financial reporting, financial and business risk management, corporate management frameworks and certain compliance matters;
- **The People and Culture Committee** – oversees risks pertaining to the Company's human resources. In particular, the Committee will advise the Board on the remuneration and performance measurement policy, organisational development practices, Board performance, and succession planning and remuneration of the Chief Executive Officer and Managing Director;
- **The Safety, Operations and Environment Risk Committee** – oversees risks pertaining to the operations of the generation, hydraulic and communication assets of the Company, workplace health and safety and environmental practices, including water release obligations;
- **The Portfolio Risk Committee** – oversees risks pertaining to the Company's energy trading activities (including credit risk management), treasury functions, trading operations and corporate and strategic activities; and
- **The 2.0 Committee** – oversees risks pertaining to the delivery of the Snowy 2.0 Project including project management, environmental, technical design and construction, procurement, legal and stakeholder related risks.

The Snowy Hydro Board conducts regular site visits to gain a first-hand understanding of our assets and safety standards, and to engage directly with a wide range of staff and community stakeholders. With COVID-19 impacting the frequency of these visits, Snowy Hydro is exploring alternative means to maintain the Board's close engagement with our people and operations, including through virtual site visits.

PLAN PERFORMANCE MEASURES

Snowy Hydro's performance is measured against financial and operational indicators incorporating safety, environment, revenue and customer components. While some performance measures, such as safety, apply across the Snowy Hydro Group, others are cascaded across business units and roles as relevant to ensure alignment on the Company's objectives. This framework is benchmarked against industry best practice and is reviewed annually by the Board.

The Board and management regularly review the key performance measures to ensure the Company is meeting its objectives and identify emerging issues. In addition, Board Committees review performance measures and targets within the remit of their respective Charters in detail based on performance and current developments.

FINANCIAL MEASURES

Snowy Hydro's Consolidated EBITDA will be driven by the growth platform the Company has established. The mix of C&I and mass-market retail customers will be balanced by the ongoing sale of wholesale products, with a particular focus on combining capacity, renewable energy and storage products.

The Company projects solid growth in EBITDA and Net Profit after Tax.

Revenue

For Snowy, the level of capacity revenue projected for 2022 is relatively firm; rebalancing will continue throughout the Plan Period to manage changing energy and capacity balances, and market developments, particularly with an increase in energy exposure forecast for retail. While 2022 inflows (49%) are forecast to be in line with the 2021 forecast (50% PoE), generation volumes will be lower and remain below average driven by low forecast forward prices, and expected flex usage in 2021. Beyond 2022, expected inflows are slightly drier (56%) compared to the 30-year long-term average for the remainder of the Plan Period, with an expectation of higher average generation as prices are expected to recover from recent lows.

The Retail strategy is focusing on delivering the three pillars and providing earnings stability to Snowy Hydro through the long-term purchase of wholesale electricity at prices more stable than the movements in electricity forward markets. Ongoing regulatory intervention provides a number of challenges, including adjusting our customer acquisition and pricing strategies and delaying growth and value-adding technology changes.

The Retail business will grow its contribution to the Snowy Group by growing customer numbers to outpace declining average consumption.

Operating costs

Underlying Operating Costs remain the focus in a challenging near-term earnings environment. Generation operating costs are rising, driven by rising insurance costs, professional fees to support our dam safety regulatory obligations and increasing software and cyber security costs. In addition, wage inflation remains solid in the utilities sector, together with committed enterprise agreements and statutory superannuation contribution increases are inflating employee costs.

Retail Operating Costs are increasing, primarily driven by the cost to serve, bad and doubtful debts and cost to acquire/retain. In the future, the Company will look to gain process and automation efficiencies and lower customer debt balances.

Capital Expenditure

During FY21, bushfire recovery, major overhauls and technology projects incurred unbudgeted capital expenditure. Snowy Hydro's future capital expenditure will focus on ensuring the safety of our people, asset reliability and integrity and compliance with dam safety requirements.

Expenditure for the Retail businesses will focus on sustaining current market share, growing customer bases and innovative initiatives, including advanced customer insights, new customer interaction platform as well as continuing to develop customer loyalty and product offerings.

Dividends

Snowy Hydro aims to deliver premium financial returns to its Shareholder and pay the highest possible dividends while implementing the optimal and sustainable capital management required to create and protect shareholder value and maintain a strong investment-grade rating.

For planning purposes, a dividend payout ratio of 70 per cent of Net Profit After Tax (NPAT) over the medium term is considered a suitable target. Snowy Hydro's capital management strategy may change in response to economic, industry and company-specific factors, including the variability of forecast and actual inflows into the Snowy Scheme.

The Shareholder acknowledges that dividends will be calculated as a proportion of NPAT before the adjustment for the fair value of derivatives, amortisation of customers on acquisition and capitalisation of interest. Each year, an interim dividend will be paid in April and a final dividend in October. The Board will observe the Shareholder's preference for predictable dividend payments.

Credit Rating

Maintaining a strong investment-grade credit rating is key to Snowy Hydro's commercial success. It is a key measure of our creditworthiness and the ability to honour contracts covering market risks, and underpins the risk management products we provide to energy market participants.

NON-FINANCIAL MEASURES

Snowy Hydro measures itself with a series of non-financial operational performance measures that seek to align our people with the things we can and must stand for.

Table 1: Key non-financials forecasts

Purpose and measure	FY21	FY22 targets	FY23 onwards targets
Staff and safety			
Fatalities (number of employees and supervise contractors)	0	0	0
Total reportable injury frequency rate (number per million hours worked; employees and supervised contractors)	3.32	3.7	Reducing over time
Employee engagement (percentage of staff very/extremely satisfied as determined by survey)	Top quartile of the Global Benchmark Index	Top quartile of the Global Benchmark Index Top quartile of Australian companies	Top quartile of the Global Benchmark Index Top quartile of Australian companies
Retail customer experience			
Net Promoter Score (percentage of promoters minus the percentage of detractors)	+35 Industry leading	Industry leading	Industry leading
Customer satisfaction (percentage of customers very or quite satisfied)	82%	Industry leading	Industry leading
Regulatory compliance			
Ombudsman complaints (number of complaints per mass-market customer)	1.2 (below the industry average of 2.2)	Below industry average	Below industry average
Compliance with Snowy Water Licence requirements (percentage of requirements met)	100%	100%	100%
Publicly reportable environmental licence breaches (number of)	0	0	0
Generation reliability			
Generator start reliability (%)	99.66	> 99.5	> 99.5
Generator forced outage factor (%)	2.18	< 1.0	< 1.0

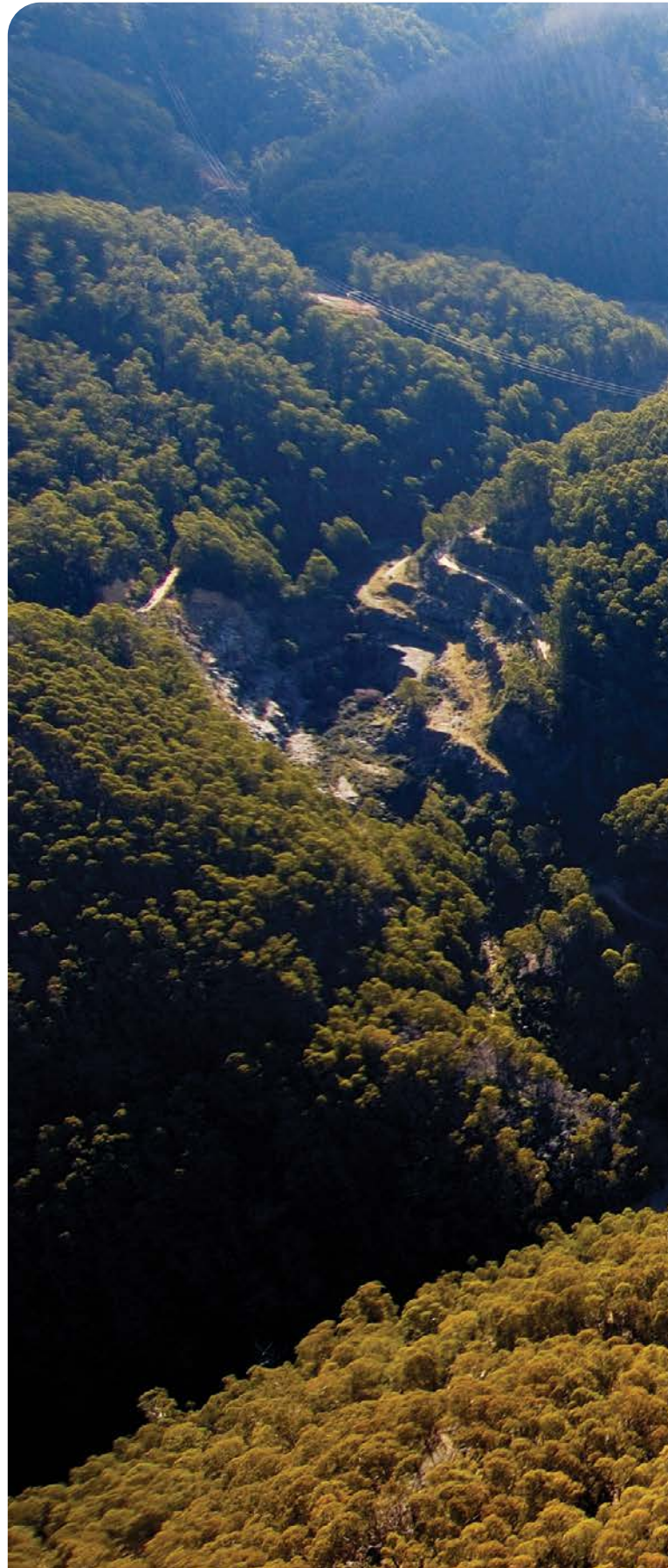
The Company is closely monitoring all aspects of the Snowy 2.0 and Hunter Power Projects and maintaining the overall guidance: *a safe project is a productive project*.

The safe and responsible delivery of the pumped-hydro expansion of the existing Snowy Scheme is the single largest project for the Company over the Plan Period. The key delivery milestones are:

1. **2021** – Commence underground tunnelling works;
2. **2022** – Commence excavation of underground power station complex commences;
3. **2023** – Completion of all three TBM drives;
4. **2024** – Completion power waterways, power station complex and commence installation of major equipment; and,
5. **2025** – First power out of Snowy 2.0.

To support Australia's transition to intermittent, renewable energy sources and provide stability in the NEM, the dispatchable Hunter Gas Plant will be constructed with hydrogen-ready capability. The key delivery milestones are:

1. **2021** – Final Investment Decision reached;
2. **2022** – Construction of the power station commences; and
3. **2023** – First power out of the Hunter Gas Plant.







RISK MANAGEMENT



RISK MANAGEMENT FRAMEWORK

Snowy Hydro's Board and management are committed to maintaining a robust and effective risk management framework that proactively identifies, assesses and manages risks across the Company.

Snowy Hydro's risk management framework aligns with the international standard for risk management: AS/NZS ISO 31000:2009 *Risk Management – Principles and Guidelines* and is based on a 'Three Lines of Defence' model.

Our approach to risk management

The corporate *Risk Management Policy* sets out the Company's objectives of maintaining and continuously improving a strategic enterprise-wide approach to risk management, integrated into organisational processes and underpinned by a risk-aware culture.

The Board has ultimate accountability for managing risks affecting Snowy Hydro and ensuring effective risk management practices are in place across the business. The Audit and Compliance Committee assists the Board by monitoring the effectiveness of Snowy Hydro's risk identification and management framework. Other Board Committees (comprising the Safety, Operations and Environmental Risk, Portfolio Risk, People and Culture and Snowy 2.0 committees) support the Board in managing key risk areas within their remit, including safety, environmental, operational, retail, project, regulatory compliance, portfolio, energy trading, and people-related risks.

Management is accountable for, and has implemented, internal controls to identify, evaluate and manage Snowy Hydro's significant business risks. These internal controls cover regulatory compliance, financial and operational risks, and take the form of appropriate financial delegations, planning and reporting, compliance with applicable regulatory requirements, procurement standards, strategic and operational planning, and internal audit practices.

The effectiveness of the risk management framework is regularly assessed through self-reviews and independent and objective assurance provided by Snowy Hydro's Internal Audit. Internal Audit operates according to an annual internal audit plan tailored to address key internal and external risks applicable to the business. This plan is reviewed and approved annually by the Audit and Compliance Committee of the Board, and audit results are incorporated into the continuous improvement of the risk management framework and supporting controls. Further assurance is provided via the appointment of an external auditor to audit Snowy Hydro's financial statements.

Key risks and mitigation strategies

Safety is Snowy Hydro's foremost priority; the Company strives to ensure the safety and wellbeing of its employees, contractors and the communities in which it operates. Recent challenges posed by regional bushfires and COVID-19, and the commencement of significant construction activity on Snowy 2.0, have led to increased inherent safety risks. These risks are identified and controlled via a robust health and safety system underpinned by visible safety leadership, comprehensive staff training and clear processes for reporting, investigating and sharing learnings from incidents.

The Company implemented a comprehensive program of safety assurance activities across the business, including on the Snowy 2.0 project, with outcomes reported to management and the Board. COVID-19 risk protocols and COVID-safe plans remain in place across the Group and are reviewed regularly to ensure they remain fit-for-purpose.

Transmission augmentation and the timely delivery of transmission links are critical for the NEM and for the Company. Failure to deliver transmission infrastructure to connect Snowy 2.0 to the NEM in a timely manner (being Humelink and VNI West) could impact timely delivery of the project and impede its ability to provide system security and reliability. While transmission accountability sits with external parties, Snowy Hydro is exploring options to mitigate this risk, including alternative pathways.

Policy and market intervention remains heightened across the NEM, with the potential for state-based and Federal policy changes that could adversely impact the market's efficiency and the Company's operations. Snowy Hydro is focused on mitigating these risks through advocacy and engagement with industry and regulatory stakeholders seeking outcomes in the best interests of the market and consumers.



GLOSSARY

Abbreviation or term definition	Definition
ABN	Australian Business Number
AEC	Australian Energy Council
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGL	Australian Gas Light Company
AS	Australian Standard
ASX	Australian Stock Exchange
BCA	Business Council of Australia
BESS	Battery Energy Storage Systems
C&I	Commercial and Industrial customer, > 4GWh/annum (> 800 times annual average mass-market customer consumption)
caps	Capacity contracts
CEC	Clean Energy Council
CEO	Chief Executive Officer
COAG	Council of Australian Governments
COGATI	COAG Energy Council's Coordination of Generation and Transmission Investment
Company	Snowy Hydro Limited
Corporations Act	Corporations Act 2001 (Cth)
CSG	Coal Seam Gas
DMO	Default Market Offer
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
ESB	Energy Security Board

Abbreviation or term definition	Definition
ESC	Essential Services Commission
Estimates	long-range plans, projections, high-level estimates and other forward-looking information
EV	Electric Vehicles
FFO	Free Funds from Operations
Future Generation JV	Future Generation Joint Venture
FID	Final Investment Decision
FY	Financial Year
GBE	Government Business Enterprise
GJ	Gigajoule
GPO	Government Policy Order
GSOO	Gas Statement of Opportunities
HPP	Hunter Power Project
HumeLink	Wollongong to Newcastle
ISO	International Standards Organisation
ISP	Integrated system plan (for comprehensive new transmission connection across NSW, SA and Victoria)
JV	Joint Venture
LFS	Large Format Store
the Licence	Snowy Water Licence
LNG	Liquefied Natural Gas
Marinus Link	transmission link between Tasmania and Victoria
MW	megawatt

Abbreviation or term definition	Definition
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Regulations
NSW	New South Wales
NTP	Notice to Proceed
NZS	New Zealand Standard
OVO	UK-based energy provider
PC	Principal Contractor
PGPA	Public Governance, Performance and Accountability
Plan	Snowy Hydro Corporate Plan
Plan Period	5-year reporting period from 2022-2026
PoE	Probability of Exceedance
Priorities	Statement of Key Priorities
PV	Photovoltaic cells
QNI	Queensland to NSW interconnector
RIT-T	Regulatory Investment Test for Transmission
Roadmap	NSW's government's recently released Electricity Infrastructure Roadmap
RRO	retailer reliability obligation
S&P	Standard & Poor's
SA	South Australia
Semi-scheduled generation	Large scale wind and solar generation
SME	Small and Medium Enterprise
SoE	Statement of Expectations
TBM	Tunnel Boring Machines

Abbreviation or term definition	Definition
VDO	Victorian Default Offer
VIC	Victoria
VNI West	VNI West - Southern transmission link to Melbourne
VRET	Victoria's renewable energy targets
VWA	Volume Weighted Average



APPENDICES

LIST OF REQUIREMENTS

The Plan has been prepared in accordance with the requirements of:

1. Subsection 95(1) of the PGPA Act;
2. The PGPA Rule 2014; and
3. The Statement of Expectations dated 26 February 2019

The table below details the requirements met by this Plan and the page reference(s) for each requirement.

REQUIREMENT	PAGE(S)
Introduction	
• Statement of preparation	71
• The reporting period for which the Plan is prepared	3
• The reporting period covered by the Plan	3
Purposes	6-11
Key activities	12-19
Operating context	
• Environment	31-42
• Capability	50-51
• Risk oversight and management	62-64
• Cooperation	n/a
• Subsidiaries	39-41, 48-49
Performance	19-30, 56-60

snowyhydro

