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AGL Energy's Path of Shareholder Value (and Environmental) Destruction

How Australia's Biggest Polluter Destroyed $12 billion in Shareholder Value

On 1 July 2021, the share price of AGL Energy ("AGL") hit an almost double-decade low of A$8.00 after reaching record highs just four years ago. The prolonged and unrelenting share price fall, which commenced almost immediately following the departure of former CEO Andy Vesey in 2017, has wiped over 70% of AGL's market value to date, and destroyed over A$12bn in shareholder value.

Earlier this year, AGL posted a staggering A$2.7bn loss[1] resulting from write-downs related to poor risk management on an early push into windfarms (A$1.9bn), and increases in the provisions relating to failure to adequately understand the financial costs of rehabilitating its coal plants (A$1.1bn), which arguably still remain grossly inadequate for restoring all four of AGL's sites.[2]

AGL's share price fall, which commenced in 2017, has wiped over 70% of AGL's market value to date.

Falls in wholesale electricity prices have undermined AGL's profitability. However, AGL's destruction of $12bn in shareholder value commenced well before this year's write downs and the recent power price volatility. A decade of flawed, short-term cash driven decisions and political interference is more centrally to blame. Excessive management turnover and no consistent overall strategy aligned with the scientific consensus on climate risk has also called into question whether management and the board has really understood what business they are in.

AGL's Binge on Coal Propels It to Become a World-Leading Carbon Polluter

Only a decade ago, AGL billed itself as Australia's "Renewable Energy Leader".[3] As the carbon pricing scheme was rolling out in Australia between 2010-2012, AGL had

[1] AGL Energy. Asset impairment and recognition of onerous contracts. 4 February 2021.
[2] On 4 February 2021, AGL Energy recognized charges of $2.686bn in its financial statements for the period ended 31 December. The charges reflect $1,920m in provisions for onerous contracts related to legacy wind farm offtake agreements, increases to environmental restoration provisions of $1,112m, and further impairments of $532m across AGL's Generation Fleet and natural gas assets, net of a positive tax effect of $878m.
[3] AGL Energy. Annual Report 2011. 26 September 2011. p. 4,

become the largest individual investor in wind and solar farms, positioning itself as the dominant provider of renewable energy in the country.

The CEO of the time Michael Fraser, was, at least temporarily, a vocal advocate for clean energy and the transition to a low carbon economy.[4] The company welcomed the mandatory Renewable Energy Target, which was legislated in 2009, and announced a pipeline of A$7bn in projects over the following decade to help meet Australia's 20% overall renewable energy goals.[5]

During the 2011 fiscal year however AGL's green ambitions faded. Following a year of low wholesale electricity prices and excess capacity, the company posted weak profits[6] and announced it was shelving its billions of dollars' worth of investments in renewable projects[7], grumbling that the federal government subsidies for windfarms weren't working.[8]

During the 2011 fiscal year, AGL's green ambitions faded.

When the opportunity arose to acquire the Loy Yang A thermal power station and brown coal mine in 2012[9], near term profits appear to have prevailed over principles and AGL went ahead with the deal. The purchase from distressed seller TEPCO was heavily discounted and included a sweetener of $1bn in carbon credits from the federal government. As the cheapest generator in the market, Loy Yang in south-eastern Victoria was expected to produce "substantial future operating cash flows"[10] – in other words, to be AGL's cash machine.

Loy Yang was (and continues to be) one of Australia's dirtiest power stations, emitting over 18.5 million tonnes per year (Mtpa) of greenhouse gases.[11] Indeed, as a result of the acquisition, AGL's coal power assets now rank the company as the largest carbon polluter in the country, emitting more than twice that of second-ranked EnergyAustralia.[12]

Nevertheless, AGL argued that despite the acquisition, it was still committed to its position as a renewable energy leader and the cash generated from Loy Yang A

[4] AGL Energy. AGL CEO new chair of Clean Energy Council. 16 September 2011.
[5] Sydney Morning Herald. AGL to develop renewable energy projects. 23 August 2009.
[6] AGL Energy. AGL reports FY2011 profit in line with guidance | AGL. 25 August 2011.
[7] The Age. AGL axes wind projects until carbon price approved. 24 February 2011.
[8] The Australian. Failed subsidies put AGL wind farm plans up in the air. 24 February 2011.
[9] AGL Energy. AGL to acquire Loy Yang A Power Station and adjacent coal mine. 24 February 2012
[10] AGL Energy. ASX and Media Release. AGL to acquire Loy Yang A Power Station and adjacent coal mine. 24 February 2012.
[11] Australian Government. Clean Energy Regulator. Loy Yang Power Station and Mine. 28 February 2020.
[12] Australian Government. Clean Energy Regulator. 2019-20 published data highlights. 25 February 2021.

would support its planned investments in renewable opportunities.[13]

The acquisition of Loy Yang A was a short-term win for shareholders, but also saw AGL's commitment to renewables being short-lived.

AGL continued its foray into thermal generated assets in 2014 with the purchase of the New South Wales (NSW) government's power generating assets, Macquarie Generation ('MacGen') which included black coal-fired generators Bayswater and Liddell.[14] Desperate to offload the assets, NSW gave the Liddell plant to AGL effectively for free.[15] Heavily subsidized long-term contracts for coal supplies also meant that Bayswater and Liddell would be the lowest cost baseload generators in the National Electricity Market ('NEM') covering the eastern states of Australia, and hence the MacGen acquisition was immediately earnings per share (EPS) accretive.

AGL's coal power assets now rank the company as the largest carbon polluter in Australia.

With the rollback of Australia's carbon tax and the unexpected closure of the Hazelwood power station in Victoria, the MacGen acquisition was a short-term success. Following Hazelwood's closure, wholesale electricity prices rose significantly across the NEM.[16] Due to MacGen's ability to source coal at extremely low prices, profits and AGL's share price soared.

The longer-term problem with AGL's entire business strategy overhaul, however, was that its generating asset mix had altered dramatically. By FY15, coal represented 60% of AGL's total asset capacity, making the company highly sensitive to wholesale electricity price fluctuations and dramatically exposed to any global alignment with the Paris Agreement.

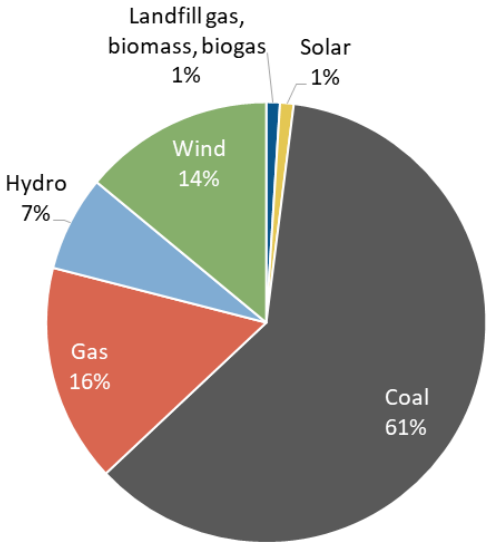
Revenue Mix and the Impact of Wholesale Electricity Prices

With the purchase of the aging 2.2GW Loy Yang A, 2.6GW Bayswater, and 2.0GW Liddell coal-fired generators, AGL became the largest generator in the NEM

[13] Australian Financial Review. Loy Yang numbers stack up for AGL. 25 May 2012.
[14] AGL Energy. AGL completes acquisition of Macquarie Generation assets. 2 September 2014.
[15] The MacGen assets had a purchase price of A$1.505bn comprising of a coal cost advantage valued at $768m, Bayswater valued at A$780m, and Liddell valued at $0 representing a "free" option. AGL. Macquarie Generation Acquisition presentation. 20 August 2014.
[16] In Victoria, average spot prices for 2017 were up 85% in 2016 and up 32% in South Australia for the same period. New South Wales and Queensland were up 63% and 53% respectively. Australian Energy Regulator. Wholesale electricity prices higher since Hazelwood exit. 29 March 2018.

accounting for ~20% of the total domestic generation capacity.[17] The company became highly leveraged to thermal generation, and wholesale electricity prices became the key driver of revenue generation and share price growth.

Figure 1: AGL's Generation Assets FY20

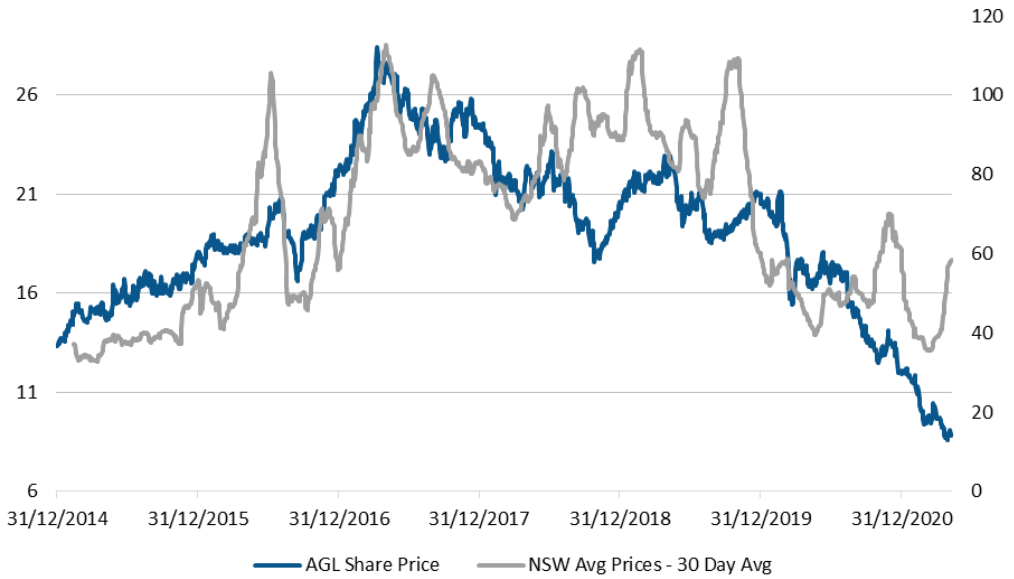


Source: AGL Energy, Bloomberg.

When wholesale electricity prices were high, AGL was able to pass price increases onto consumers, rake in the profits and pay bumper dividends. In the period between 2014-2018, average spot electricity prices rose 90% and AGL's net earnings comparably rose +65%. AGL's share price over the same period rocketed over 80%.[18]

[17] WattClarity. AGL is almost twice as large as the second biggest generator – who's also in the list? 10 October 2014.
[18] Source: Bloomberg.

Figure 2: AGL's Share Price Has a 72% Correlation with Wholesale Electricity Prices



Source: Bloomberg, AEMO.

Similarly, lower wholesale electricity prices have had an inverse effect. Operating costs are relatively constant with wholesale prices needing to exceed $50-55 per megawatt hour (MWh) for AGL's coal generating assets to break even according to broker, Ord Minnett.[19] As there is a much longer lead time for charging customers higher prices, margins were squeezed and the company was required to absorb losses.

Since 2014 (when AGL acquired the MacGen assets), the correlation between the AGL share price and NSW Average Pool Prices has exceeded 70%.[20] In the last 18 months, this relationship has decoupled, compounding the downward electricity price with a laundry list of problems surrounding the company, including government interference in the closure of Liddell, the enormous write-downs announced in February 2021 and the impending demerger. Aside from these extraordinary issues, the relationship between wholesale energy prices and AGL's bottom line continues to exist (noting the recent decoupling as wholesale prices have temporarily spiked on the back of two coal power plant debacles in the NEM).

The aging profile of AGL's power stations have also weighed on earnings and overall results. Liddell, due to be retired in 2023, has become increasingly unreliable, suffering numerous outages which are costly to fix[21], and its lack of operational flexibility means it is consistently unresponsive at times of peak power demand and hence prices. In 2020 Liddell's capacity factor was 42%, a sharp decline on the year

[19] FN Arena. Cheap Power Very Expensive for AGL, Origin. 8 February 2021.
[20] Source: Bloomberg, AEMO, IEEFA Calculations.
[21] The Australia Institute. Liddell unreliable, renewables cheaper. 4 April 2018.

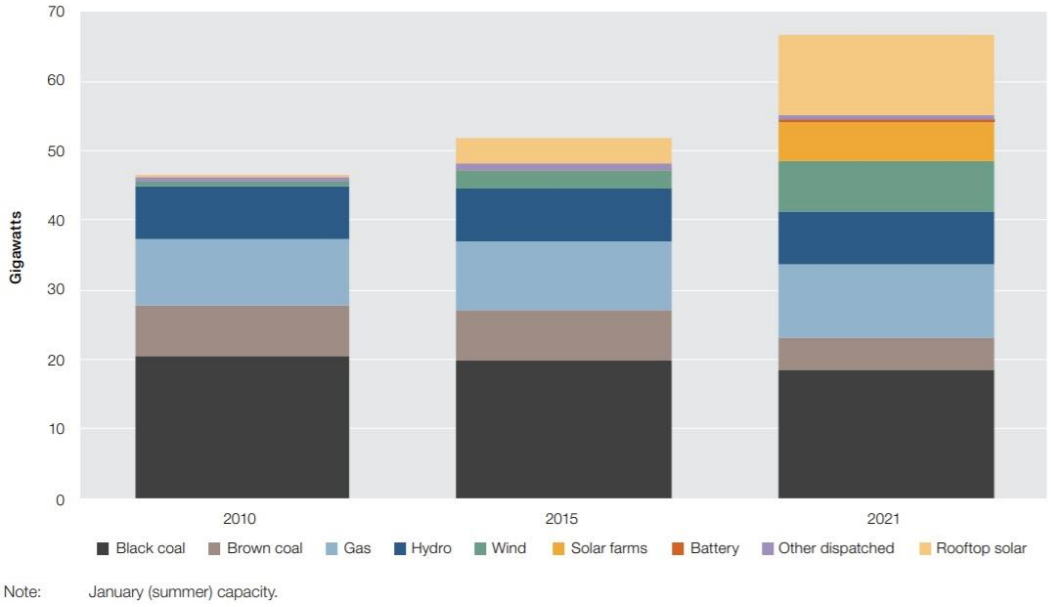
prior where it ran at a capacity of 59%.

Rehabilitation provisions for retirement and remediation of AGL's power stations are also a financial expense which have impacted profitability, and the funding of these provisions will massively undermine AGL's free cash generation over the coming decade. For the period ending 31 December 2020, AGL booked a trebling of the provision for environmental restoration of $1.112bn. The total provision therefore now stands at $1.394bn for rehabilitation of its four sites (Liddell, Bayswater, Loy Yang A and the Camden Gas Project).[22]

Arguably these provisions should have been accounted for over the period for which they owned them (Loy Yang A was purchased in 2012, MacGen in 2014).

Considering the estimate for rehabilitating the Hazelwood site is expected to exceed $740m[23], AGL's total rehabilitation provision for the four sites (~$350m per site) still appears grossly inadequate, posing the risk of environmental damage at each site and if AGL fails, this leaves the risk with community and taxpayers to pay the bill.

Figure 3: Generation Capacity by Technology



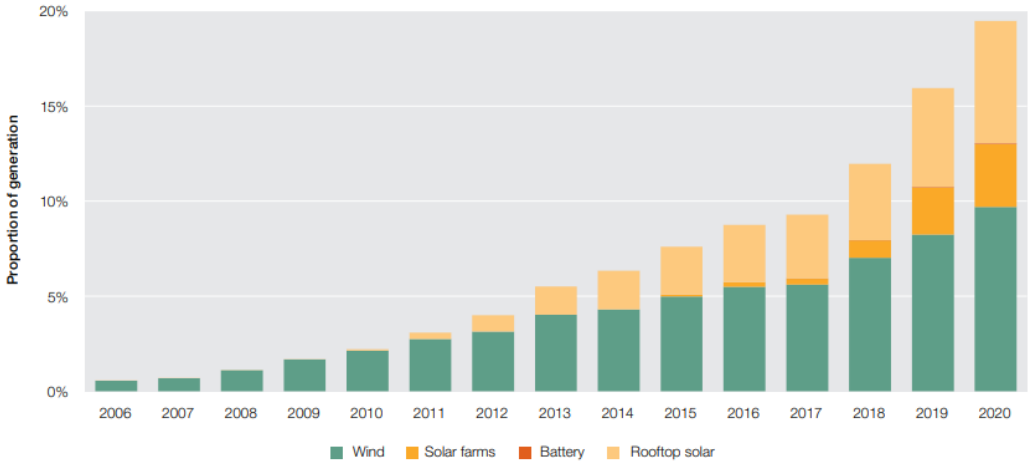
Source: Australian Energy Regulator (AER). State of the Energy Market 2021. AEMO data.

[22] AGL Energy. ASX & Media Release. Asset impairment and recognition of onerous contracts. 4 February 2021.
[23] ABC News. Hazelwood rehabilitation estimated to cost $743 million but may rise, Engie says. 20 Jan 2017.

Solar (and Other Renewables) Are Deflationary

Wholesale energy prices have created challenging conditions for AGL's profitability in the last few years. Being long aging, inflexible coal-generating assets has particularly been a problem given the significant changes in the overall generation mix in Australia since 2017.

Figure 4: Renewable Generation in the National Energy Market



Source: Australian Energy Regulator (AER). State of the Energy Market 2021. AEMO data.

As highlighted in the Australian Energy Regulator's 2021 State of the Energy Market report, Australia's electricity markets are undergoing 'a profound transformation from a centralized system of largely fossil fuel generation… towards an array of smaller scale renewable sources'.[24]

The proportion of energy generated from renewable sources in the NEM now represents more than 28.8% of generation[25], more than double the proportion of generation in 2015. Because renewable energy sources have very low running costs and are able to bid at the lowest price given a zero short run marginal cost of production, the 'merit order' dictates that they get dispatch priority in the bidding order of national electricity markets, bringing average prices down.

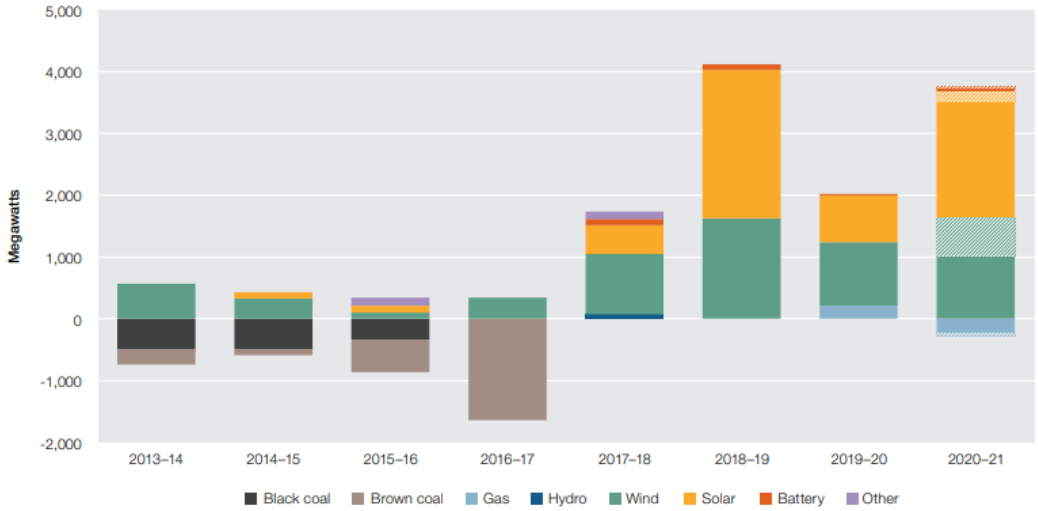
Thanks to the cheap acquisition prices, under-provision of liabilities and coal subsidies, AGL's thermal generators traditionally sat near the bottom of the merit order and initially were better shielded from price fluctuations than the more expensive coal-fired generators. The tidal wave of new wind and solar developments however have displaced AGL's priority in the merit order while also increasingly placing downward pressure on electricity prices and impacting AGL's bottom line.

[24] Australian Energy Regulator. State of the energy market 2021. 2 July 2021.
[25] Open NEM.

Earlier this year AGL's then CEO, Brett Redman suggested the possibility of "seasonally cycling" or mothballing of its units to manage lulls in demand (and subsequently profitability).[26] As the Australian Financial Review aptly observed, "The best-case scenario for AGL is that the collapse in electricity prices is cyclical."[27] In July 2021 AGL announced the mothballing of its now uncompetitive outdated 'baseload' fossil gas power plant at Torrens B1 in South Australia, building on the previously announced closure plans of Torrens A, slated for 2022.

AGL's higher cost, inflexible thermal power plants increasingly can't compete with lower cost renewable energy and are being crowded out of the market by subsidized government supply.[28] And the suggestion that electricity prices continue to be cyclical is unlikely in our opinion.[29]

Figure 5: New Generation Investment and Plant Withdrawals



Note: Capacity includes scheduled and semi-scheduled generation, but not non-scheduled or rooftop PV capacity. 2020–21 data are at 31 March 2021. Investment and closures expected between 1 April and 30 June 2021 are shown as shaded components.

Source: Australian Energy Regulator (AER). State of the Energy Market 2021. AEMO data.

Federal government subsidized projects such as NSW's Snowy Hydro 2.0 and Kurri Kurri gas, and ambitious renewable energy targets and incentives set by several state and territory governments would suggest there is no longer a 'cycle'. Australia is in a technology-driven transition and electricity prices are likely to continue to decline as more low-cost renewables and battery capacity are brought online. The

[26] AGL Energy. ASX& Media Release. AGL announces intention to create two leading energy businesses. 30 March 2021.
[27] Australian Financial Review. AGL faces an existential crisis. 26 February 2021.
[28] Australian Financial Review. 7 July 2021.
[29] Recent outages at Yallourn and Callide Power Stations have recently led to an increase in wholesale electricity prices. Prices are expected to continue to decline due to the influx of renewable energy, albeit there is likely to be some volatility observed as power stations close down and outages occur.

companies which are heavily exposed to higher operational cost thermal generating assets will feel the most pain.

A Series of Short-Sighted Missteps and Strategy Changes, Plus Excess Turnover in Management

Overexposure to aging and exceptionally high emission thermal generating assets amidst an energy market transitioning to zero emission sources is arguably at the heart of AGL's problems. A series of short-sighted missteps have also weighed on profitability - inflating and overstating early year profits and failing to inform the market of the unsustainability of this - really putting into question whether the management and board have understood the massive technology, financial and policy risks of the business they operate in.

The whopping $2.7bn write-down which was announced in early 2021 included a pre-tax hit of $1.9bn in "onerous contracts" relating to wind farm off-take agreements signed between 2006 and 2012. The off-take agreements required AGL to buy the energy from wind-farms under long term purchase power agreements (PPAs) at a fixed cost, believed to be in excess of $100/MWh.[30] Due to the growth in renewable energy, wind energy costs have fallen by more than 60% since then (an entirely predictable outcome well before 2021), resulting in these contracts being increasingly out of money and AGL realizing substantial losses.

The whopping $2.7bn write-down was announced in early 2021.

Eager to increase their retail customer base, in 2015, AGL entered into a questionable arrangement to acquire Australian Power and Gas Company Limited (APG). Under the agreement, AGL would acquire APG's 344,000 customers for a total consideration of $199m valuing each customer at $562 each.[31] This is a ridiculously large number considering the cost for AGL to acquire a customer had averaged around $87 that financial year[32], particularly in light of the low quality customer book acquired and the extremely high customer churn rates as consumers responded to the massive ongoing price escalation and poor customer service.

Over the years, AGL has had numerous strategy changes. Clear focus would have been difficult due to multiple management changes in the last decade, including four

[30] Renew Economy. How AGL lost nearly $2 billion from its early push into wind farms. 4 February 2021.
[31] AGL Energy. ASX & Media Release. AGL announces recommended takeover offer for Australian Power & Gas Company Limited. 15 July 2013.
[32] AGL Energy. 2013 Annual Report.

CEOs with, at times, polarizing ideas at the helm.

Government meddling (which at times looked more like bullying) into extending the closure of the Liddell Power Station forced management's hand on various occasions. The coalition government had been intent on extending the life of Liddell, even threatening nationalization, despite the beyond-end of technical life and unsafe working conditions representing more of a liability at this point in time, consistent with the zero purchase price ascribed to this asset on sale by the NSW government seven years ago.[33]

AGL's plunging share price over the last few years has now spurred a drastic rethink in their operations. Following the acquisition of thermal generators, Loy Yang and MacGen, AGL saw a temporary booming valuation and dividends. But the opportunity to reinvest these unsustainable profits and transform AGL into Australia's renewable energy leader was squandered.

The opportunity to reinvest unsustainable profits and transform AGL into Australia's renewable energy leader was squandered.

Particularly in the past 18 months, the company has been frantically trying to catch up to Australia's energy transition, with new renewable projects including the enormous distraction of the highly priced acquisition of Tilt Renewables[34], as well as plans for a pumped hydro facility in the Hunter Valley in NSW and the acquisition of two major solar players, Epho and Solgen Energy Group.

Most recently, the new interim CEO has been trying to sell the idea of a demerger to shareholders which splits off AGL's thermal asset base, with desperate attempts to maintain the company's credit-worthiness to refinance its debt obligations while simultaneously funding renewables growth. PrimeCo / New has been structured to give at least NewCo the opportunity to survive longer term and remain relevant in the midst of the inevitable global capital market pivot to the decarbonised energy system of the future, all the while slashing dividend payments for AGL's embattled shareholders. Quite a hard sell.

[33] Renew Economy. The "Let's bully and force AGL to sell Liddell" legislation. 5 December 2018.
[34] Reuters. Tilt Renewables agrees to $2.1 billion takeover, shares hit record. 15 March 2021.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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