

## Chronological Listing of Key Announcements in the Kurri Kurri Gas/Diesel/~~Hydrogen~~ Power Station Saga

Date	Announcement/Document issued
15 Sep 2020	<p><b>‘Ensuring affordable, reliable and secure electricity supply’, Media Release<sup>1</sup>, Scott Morrison and Angus Taylor</b></p> <p><b>Morrison Government sets a target for the electricity sector to commit to 1000 MW of new generation by end-April 2021 to replace Liddell Power Station, or else Snowy Hydro will build a gas power station at Kurri Kurri [KKPS]</b></p> <p>“The Government is setting a target for the electricity sector to deliver 1,000 megawatts of new dispatchable energy to replace the Liddell power station before it closes down in [April] 2023. To protect families and businesses against the risk of price rises, the Government will step up and back a new gas power plant in the Hunter Valley if the sector doesn’t replace Liddell’s capacity.</p> <p>The Liddell Taskforce found closing the plant without adequate dispatchable replacement capacity risks prices rising by around 30 per cent over two years, or \$20 per megawatt hour to \$80 in 2024 and up to \$105 per MWH by 2030.</p> <p>The Prime Minister said the potential price increases were unacceptable and would represent a huge hit to families, businesses and job creating industries in NSW if the energy generated by Liddell wasn’t replaced. “We won’t risk the affordability and reliability of the NSW energy system and will step in unless the industry steps up.</p> <p>To ensure we do not have a scenario without replacement, the Government is giving the private sector until the end of April 2021 to reach final investment decisions on 1000 MW of dispatchable capacity, with a commitment for generation in time for summer 2023-24.</p> <p>To this end, Snowy Hydro Limited is developing options to build a gas generator in the Hunter Valley at Kurri Kurri should the market not deliver what consumers need. If industry steps up, we’ll step back.”</p>
12 Dec 2020	<p><b>Critical State Significant Infrastructure Declaration<sup>2</sup></b></p> <p><i>(Comment: this Declaration, together with the making of the Final Investment Decision and the issuing of the EIS (the following two items), all occurred well before expiry of the Morrison target. Obviously Snowy Hydro was assuming government approval, which was duly received on 19 May 2021)</i></p> <p>“The object of this Order is to declare certain development for the purposes of the Kurri Kurri Gas-fired Power Station Project to be State significant infrastructure and critical State significant infrastructure. The relevant development involves the construction and operation of a gas-fired power station at the former Kurri Kurri aluminium smelter site and the construction of associated infrastructure.”</p>

<sup>1</sup> [‘Ensuring affordable, reliable and secure electricity supply’, Scott Morrison, Angus Taylor](#)

<sup>2</sup> [Environmental Planning and Assessment Amendment \(Kurri Kurri Gas-Fired Power Station Project\) Order 2020, Minister for Planning and Public Spaces](#)

Date	Announcement/Document issued
<b>10 Mar 2021</b>	<p><b>Snowy Hydro makes Final Investment Decision<sup>3</sup>, completion due Dec 2023</b>  <i>(Comment: the FID Business Case, revealing the date of the FID, was not released till 17 October 2021 - seven months later)</i></p> <p>Key milestones:</p> <ol style="list-style-type: none"> <li>1. 10 March 2021: Final Investment Decision (FID);</li> <li>2. April 2021: OEM input to draft GPS;</li> <li>3. May 2021: Site purchase option exercised;</li> <li>4. August 2021: GT major equipment design and procurement signed</li> <li>...</li> <li>12. December 2023: Practical completion or commercial operation date"</li> </ol>
<b>22 Apr 2021</b>	<p><b>Hunter Power Project Environmental Impact Statement<sup>4</sup></b>  <b>Capacity factor up to 10% gas/2% diesel, but likely operation about 2% a year</b>  <b>Capital cost (main plant only) approximately \$610m, operational by end-2023</b>  <i>(Comment: The EIS Scoping Report<sup>5</sup> had been submitted on 18 December 2020. Key objective is to provide a fast start firming electricity generation capacity. Scant mention of the need for a massive gas storage, nor its cost.)</i></p> <p>"Snowy Hydro now seeks approval for the development of an open cycle gas fired power station near Kurri Kurri, NSW. The power station is expected to have a generation capacity of up to approximately 750 megawatts (MW), generated by two gas turbine units in Open Cycle Gas Turbine configuration.</p> <p>The Proposal is to operate at a capacity factor of up to 10 per cent on natural gas and up to two per cent on diesel in any given year. However, it is expected that likely operations would result in a capacity factor of about two per cent in any given year.</p> <p>For gas operation, the Proposal would also require a new gas lateral pipeline and gas receiving station. These would be developed, constructed and operated by a third party. Gas would be supplied from Australia's existing gas fields that feed Sydney and Newcastle via the existing NSW gas transmission system.</p> <p>The Proposal has a capital cost of approximately \$610 million, and is anticipated to be operational by the end of 2023.</p> <p>The key economic objective of the Proposal is to provide a fast start firming electricity generation facility to supplement Snowy Hydro's generation portfolio with dispatchable capacity when the needs of electricity consumers are highest."</p>
<b>19 May 2021</b>	<p><b>'Protecting families and businesses from higher energy prices', Media Release<sup>6</sup>, Angus Taylor</b>  <b>No response to target, so Government approves 660 MW KKPS, committing up to \$600m</b></p>

<sup>3</sup> [Hunter Power Project FID - Business Case 'Good for jobs. Good for prices. Underpinning renewables'](#)

<sup>4</sup> [Hunter Power Project Environmental Impact Statement](#)

<sup>5</sup> ['Kurri Kurri OCGT Gas Fired Power Station Environmental and Planning Scoping Report', 18 Dec 2020](#)

<sup>6</sup> ['Protecting families and businesses from higher energy prices', Angus Taylor](#)

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	<p>“The Morrison Government is stepping up and building a new gas power plant in the Hunter Valley, which will create jobs, keep energy prices low, keep the lights on and help reduce emissions. This important project delivers on the Government’s <u>1,000 MW target set last September</u>, which was created to avoid unacceptable price increases following the closure of the Liddell power station in 2023.</p> <p>In the 2021-22 Budget, the Government committed up to \$600 million for Snowy Hydro Limited to construct a 660 MW open cycle gas turbine at Kurri Kurri in the Hunter Valley. This project ... will help shore up the security, reliability and affordability of electricity for consumers in NSW, with a commitment to be generating in time for summer 2023-24 when Liddell closes.</p> <p>Minister for Energy and Emissions Reduction Angus Taylor said the Government had given the private sector every opportunity and is fulfilling its promise to deliver the cheap, reliable power that NSW households, businesses and industries needed to prosper and grow. We were very clear from the start – we will not stand by and watch prices go up and the lights go off.”</p>
<b>19 May 2021</b>	<p><b>‘Morrison Government’s Own Experts Oppose Kurri Kurri Gas Plant’, Media Release<sup>7</sup>, Chris Bowen</b></p> <p><b>Labor Opposition criticises KKPS - driven by politics and the climate wars, not energy needs. Gas projects should be funded by the private sector, not taxpayers</b></p> <p>“The Morrison Government must urgently justify its spending on a new gas-fired power plant at Kurri Kurri – or admit that its decision is driven by ideology and politics, not energy needs.</p> <p>Scott Morrison wants to spend \$600 million of taxpayers’ money on a project his own experts don’t support. The Government’s hand-picked Chair of the Energy Security Board says the Kurri Kurri project “doesn’t stack up, because it’s expensive power”. The Australian Energy Market Operator says the new generation needed to replace Liddell is a fraction of the Government’s claims. The Liddell Taskforce itself says existing generation projects are “more than sufficient” to meet those needs. And even Kurri Kurri’s proponents admit that the Government’s \$600 million plant would only be used 2 per cent of the time.</p> <p>In light of this overwhelming advice, today’s announcement looks like a cynical attempt to pick a fight on gas and continue the climate wars, or to reward the major Liberal donor who owns the Kurri Kurri site. Labor supports an ongoing role for gas in firming and peaking electricity supply. But gas projects that stack up will be funded by the private sector, not taxpayers.”</p>
<b>10 Jun 2021</b>	<p><b>Snowy Hydro responds to criticism, saying another five gas plants needed, and the government will receive a ‘very good’ return<sup>8</sup></b></p>

<sup>7</sup> [‘Morrison Government’s Own Experts Oppose Kurri Kurri Gas Plant’, Chris Bowen](#)

<sup>8</sup> [‘Snowy sees room for five more gas plants, says 100 pct renewables inconceivable’, RenewEconomy’](#)

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	<p>“The government-owned energy utility Snowy Hydro, stung by the widespread criticism of the taxpayer-funded Kurri Kurri gas generator, says there is room for another five gas generators in Australia’s main grid, and suggests that it will be impossible to achieve 100 per cent renewables in Australia.</p> <p>Snowy chief financial officer Gordon Wymer also rejected suggestions that the \$600 million in government funds for Kurri Kurri amounts to a subsidy, noting that it was an “equity investment” from the government, which will get a “very good” return. “We haven’t lost a dollar on any investment we have made,” he said.</p> <p>Wymer said the company “bristled” at suggestions the Kurri Kurri gas generator was being built under instructions from the Morrison government. We build these thing[s] because of the demand in our portfolio, not because the government told us to. The energy minister and the finance minister are fans of the project because they have seen the detailed business case, which is extremely extensive.”</p>
4 Aug 2021	<p><b>KKPS EIS Response to Submissions<sup>9</sup></b></p> <p><b>i) 98% of EIS submissions opposed the project</b></p> <p>“A total of 221 public submissions were received regarding the EIS. Of the public submissions, 217 are objecting, three are commenting and one is supporting. The most common issues raised by organisations and the public centred around project justification, renewable energy and climate change, and potential noise and air pollution impacts.”</p> <p><b>ii) The EIS extols the advantages of gas generators to provide continuous dispatchable capacity over days, weeks and months (versus batteries of just a few hours)</b></p> <p>“Batteries are suited to managing fluctuations in the energy balance over short time periods. They can respond very quickly, and with very high levels of precision, as well as switching quickly from charging to discharging depending on system requirements. However, they have limited energy storage capacity (typically hours), long recharge times.</p> <p>Gas-powered generation has considerable advantages over longer periods, providing dispatchable capacity over days and weeks, in comparison to intra-day firming typically available from battery storage. Large volumes of gas may be stored in the gas network and in dedicated gas storages for very long periods in time, and the gas network supports continuous ongoing operation of gas generation on an unrestricted basis within the constraints of Project and environmental approvals.</p> <p>Gas powered generation ... is particularly well suited to managing prolonged periods of low wind generation, which may last for weeks or months. The Proposal has been put forward to provide flexible and longer duration firming capacity that batteries currently do not provide.”</p> <p><b>iii) KKPS on-site gas storage will only allow operation for 6-7 hours. Refilling takes a day</b></p>

<sup>9</sup> [Hunter Power Project EIS - Response to Submissions](#)

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	<p><i>(Comment: KKPS cannot provide dispatchable capacity 24/7, i.e. for days/ weeks/ months, as outlined above for (normal) gas generators. It can only operate for a similar time as eight-hour big batteries, and will be out-competed by them for the very reasons stated above by Snowy Hydro. Refilling is subject to gas being available, which could be problematic, especially at times when Snowy Hydro's 660 MW Colongra gas power station also needs to replenish its on-site storage from the same low capacity Sydney-Newcastle Trunkline)</i></p> <p>“Sufficient gas will be stored for the Proposal in a part of the gas lateral. This “gas bottle” will allow HPP to operate at full load for six to seven hours on gas, with the gas lateral pipeline to be refilled over one day.</p> <p>Jemena Gas Networks (JGN) have confirmed that the Northern Trunk contains sufficient spare gas transportation capacity to be able to refill the gas lateral to the power station over a one-day period, and to do so across every day of the year. Snowy Hydro will be entering into a firm gas transportation contract with JGN to such effect.”</p> <p><b>iv) Diesel back up storage for 30 hours operation (extract from EIS<sup>4</sup>)</b>  “The Proposal would also be capable of being operated on diesel fuel. Two diesel fuel storage tanks of approximately 1.75 ML volume are expected to be required to store sufficient fuel to enable the Proposal to operate at maximum capacity for nominally three consecutive days (10 hours of operation each day).”</p> <p><b>v) Hydrogen not viable or available, but the station is being designed to run on a 10-15% blend</b>  “Hydrogen is not considered a viable alternative to gas for this Proposal. As noted in the EIS, it is not currently cost-effective or available.</p> <p>The Proposal is being designed to accept a 10% mix of hydrogen in natural gas, with the potential to be upgraded to higher hydrogen mixes. The 10% is premised on the expected capability of the Northern Trunk transmission pipeline to store and transport the hydrogen and gas blend. The preferred equipment supplier's gas turbines can use a 10-15% hydrogen blend.”</p> <p><b>vi) Business Case is confidential, but forecasts net returns &gt;10%</b>  “The underlying business case is Commercial in Confidence, but it demonstrates that HPP will contribute positively to Snowy Hydro returns and will return earnings well in excess of its cost. An internal rate of return exceeding 10% is forecast for the project. The business case has been approved by the independent Board of Directors and the Shareholder (Federal Government).”</p>
<b>17 Oct 2021</b>	<p><b>Announcement<sup>10</sup> that Business Case has been released, building on Snowy Hydro's sound investments</b>  <i>(Comment: released seven months after FID approval (10 March 2021))</i></p> <p>“The Hunter Power Project is based on a strong <u>business case</u> and will have a</p>

<sup>10</sup> ['Business case released', Snowy Hydro](#)

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	<p>double-digit internal rate of return in the order 12.3%. It will build on Snowy's record of sound and strategic investments."</p> <p><b>Business Case<sup>3</sup> 'Good for jobs. Good for prices. Underpinning renewables' IRR 12.3%, 20% capital cost increase from \$600m is improbable, gas storage provides 6.5 hours operation</b>  <i>(Comment: The document is a high-level summary without any details or financial justification. A 20% increase in cost, to \$720m, is considered improbable)</i></p> <p>"The economic assessment demonstrates favourable returns across a wide range of scenarios, and a projected Asset Internal Rate of Return (IRR), for the base case of 12.3%.</p> <p>An increase in capital costs of 20% results in a projected asset IRR of 10.5%. This is considered an improbable outcome, as the components of the plant's capital costs are all transparent and subject to competition between vendors in a highly competitive global market."</p> <p>Key items:</p> <ul style="list-style-type: none"> <li>• Plant: 2 x OCGT F-Class turbines (nameplate capacity: 330 MW each; firm capacity of 644 MW))</li> <li>• Commercial Operation: Units 1&amp;2 commissioned by December 2023</li> <li>• Gas Transmission: 19 km @ 14 inch; 13.5 km @ 42 inch, 43 TJ of storage (with optionality to increase to 70 TJ) - 43 TJ is enough to run for 6.5 hours</li> <li>• Assumed gas cost of \$9.1/GJ</li> </ul> <p>Commissioning of both gas turbines by December 2023."</p>
25 Oct 2021	<p><b>Senate Estimates<sup>11</sup></b></p> <p><b>i) Government confirms allocation up to \$600m, completion summer 2023</b>  Sean Sullivan (Deputy Secretary, Department of Industry, Science, Energy and Resources): The original allocation for Kurri Kurri was up to \$600 million. We continue to meet regularly as shareholder departments with Snowy on tracking progress. This has got a short delivery time -it's summer 2023 - so keeping track of that and making sure the equity matches planned expenditure is something that we, the shareholder departments, meet very regularly on with Snowy.</p> <p><b>ii) Snowy Hydro estimates Gas Lateral Connection cost around \$100m, but is not included in the project cost</b>  <i>(Comment: whilst the gas infrastructure lease is not capital expenditure it is a cost of the project that is ultimately paid for by Snowy Hydro over the 30-year lease period)</i></p> <p>Senator McAllister: Back on the capex, the high-level overview document says that the \$600 million doesn't include the gas lateral. Some experts have said that the cost of that would be around \$100 million. Is that about right?</p>

<sup>11</sup> [Senate Estimates, Environment and Communications Legislation Committee, 25 Oct 2021](#)

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	<p>Mr Wymer (Snowy Hydro Chief Commercial Officer): That is a process that is currently being negotiated with the constructor of the pipeline [APA Group]. That's certainly a ballpark figure. That isn't capex. The builder of the pipeline charges us a lease, which Snowy Hydro will pay annually to pay off that pipeline.</p> <p><b>iii) Snowy Hydro says HPP able to use 30% to 100% hydrogen blend</b></p> <p>Mr Broad (Snowy Hydro CEO): It was hydrogen ready from day one, up to 15 per cent. Mitsubishi tells us they can take it up to 30 per cent quite easily. Beyond that, we can get it up further, but that would need some upgrades in the burners. So we're ready.</p> <p>Mr Whitby (Snowy Hydro COO): It can take, in theory, up to 100 per cent with the burner modifications.</p>
<b>10 Nov 2021</b>	<p><b>NSW Government EIS Assessment Report<sup>12</sup></b></p> <p><b>Recommends approval</b></p> <p><b>Start-up takes 30 minutes, to operate for 30 years, must be hydrogen-ready</b>  <i>(Comment: the EIS<sup>4</sup> stated that the key objective is to provide a fast start firming electricity generation capacity. 30 minutes is hardly a fast-start in a five minute market that will be dominated by big batteries with a start-stop time of milliseconds)</i></p> <p>“The power station’s start-ups would range from 50 to 200 occasions per year, with each start-up taking approximately 30 minutes to reach full capacity.”</p> <p>Snowy Hydro proposes to operate the project for 30 years and would be required to decommission the power station and rehabilitate the project site for continued industrial use at the end of project life.</p> <p>The project was declared Critical State Significant Infrastructure (CSSI) by the [NSW] Minister for Planning and Public Spaces in 2020 as the project would:</p> <ul style="list-style-type: none"> <li>• mitigate the dispatchable energy security risks posed to the NEM by the scheduled closure of Liddell Power Station in 2022-2023 and other future planned coal-fired power station closures;</li> <li>• facilitate NSW’s transition to a low carbon emissions economy by providing firming power to existing and proposed intermittent renewable energy projects;</li> <li>• mitigate potential electricity price increases associated with the closure of Liddell Power Station; and</li> <li>• generate additional investment and jobs in NSW, including direct employment of up to 250 people during construction and a capital cost of \$610 million.</li> </ul> <p>The NSW Electricity Infrastructure Roadmap identifies that new gas peaking power stations must be hydrogen-ready.</p> <p>Based on its evaluation, the Department has carefully weighed up the impacts of the project against the benefits. On balance, the Department considers that the benefits of the Hunter Power Project outweigh its costs, and the project is in the public interest and approvable, subject to strict conditions.”</p>

<sup>12</sup> [HPP EIS Assessment Report, NSW Department of Planning, Industry and Environment](#)



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<b>17 Dec 2021</b>	<p><b>NSW Government Project Approval<sup>13</sup></b></p> <p>The NSW Minister for Planning approves the EIS application, with 99 conditions.</p>
<b>1 Feb 2022</b>	<p><b>‘Labor will Ensure Certainty for Kurri Kurri Plant’, Media Release<sup>14</sup>, Anthony Albanese, Chris Bowen, Meryl Swanson (Member for Paterson)</b></p> <p><b>Labor Opposition flips to support KKPS, based on transitioning to 30% green hydrogen initially, 100% asap, as part of a Hunter Hydrogen Hub</b></p> <p><i>(Comment: there was no evidence of any research into the technical and economic viability of such a conversion, nor whether hydrogen would be available by 2023)</i></p> <p>“An Albanese Labor Government will ensure the future of the Kurri Kurri power station, and provide more secure jobs for its workers.</p> <p>But Scott Morrison is risking taxpayers’ money on a gas plant that experts say will become stranded in an increasingly renewable energy system. The Government’s hand-picked Chair of the Energy Security Board said their gas plant “doesn’t stack up, because it’s expensive power”.</p> <p>That’s why Labor will work with Snowy Hydro Limited to ensure the power plant at Kurri Kurri can transition to green hydrogen – guaranteeing a role for the station and its workers as well as affordable and reliable power for decades to come. In the first instance, a Labor Government would ask Snowy Hydro Limited to operate the plant on 30 per cent green hydrogen – a commitment which the current Government admits is possible but will not make. Labor would also ensure Snowy upgrades the plant to 100 per cent green hydrogen as soon as possible.</p> <p>Labor’s proposal will ensure investment in the Hunter – guaranteeing the region will power Australia well into the future. A future green hydrogen plant would underwrite demand for the fuel in the Hunter, helping the region to become a hydrogen hub for Australia and the world.</p> <p>Labor will work with Snowy Hydro Limited and experts on the details of this commitment, and make an additional equity injection to deliver the final project. Labor will also work with Snowy on the mismanagement and delays that have already begun to plague the project under the Morrison-Joyce Government. This investment is part of Labor’s Powering Australia plan to create jobs, cut bills and reduce emissions.”</p>
<b>1 Feb 2022</b>	<p><b>Labor pledges an extra \$700m for 30% green hydrogen initially, 100% by 2030<sup>15</sup></b></p> <p><i>(Comment: there was no substantiation of the \$700m estimate, or whether it applies to 30% conversion or 100%)</i></p> <p>“Speaking in the NSW town of Kurri Kurri on Tuesday, Anthony Albanese said if Labor</p>

<sup>13</sup> [Infrastructure Approval, Minister for Planning and Open Spaces](#)

<sup>14</sup> [‘Labor will Ensure Certainty for Kurri Kurri Plant’, Anthony Albanese, Chris Bowen, Meryl Swanson \(Member for Paterson\)](#)

<sup>15</sup> [‘Labor pledges up to \\$700m in extra funding for Snowy Hydro power plant to make it run on green hydrogen’, The Guardian](#)



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	<p>won the upcoming federal election it would ensure the publicly funded gas-fired plant announced by the Morrison government last May could run with 30% green hydrogen blended in once it started operation next year.</p> <p>The opposition leader said the Kurri Kurri plant would run entirely on hydrogen “as soon as possible”, with a goal of 2030, under a plan that would take the Coalition’s “flawed approach and make it work”.</p> <p>Labor’s climate change and energy spokesperson, Chris Bowen, said the party would allocate up to \$700m in extra equity investment to Snowy Hydro, lifting the potential total cost from \$600m to \$1.3bn.</p> <p>He said Snowy Hydro documents indicated the 660 MW plant could run 30% on hydrogen immediately, but this was not in the government’s plans. “We’ll ensure, working positively with Snowy Hydro, that will be the case,” Bowen said. Labor will also work with Snowy on the mismanagement and delays that have already begun to plague the project under the Morrison-Joyce Government.”</p>
<b>1 Feb 2022</b>	<p><b>Government criticises Labor’s hydrogen plan as electioneering<sup>15</sup></b></p> <p>Angus Taylor, the energy and emissions reduction minister, said the opposition’s plan was “economically incoherent”, and accused it of a “humiliating backflip” on the project aimed at shoring up support in the Hunter Valley, particularly in the Labor-held seats of Paterson and Hunter.</p> <p>Taylor said it would not yet be technically feasible to run the plant on hydrogen by 2030, and that the government’s goal was to first help bring down the cost of the fuel. He would not comment on when the plant would run on hydrogen under the Coalition. “There’s technical feasibility – and getting some hydrogen into the generator is technically feasible – (and) there’s economic feasibility, which is: who’s going to pay for it?”</p>
<b>10 Mar 2022</b>	<p><b>EIS<sup>16</sup> for lateral pipeline and storage (submitted by APA Group)</b></p> <p><b>i) Gas lateral and storage to cost \$264m and be completed by Q4 2023</b></p> <p>“APA Transmission Pty Limited has been engaged by Snowy Hydro to develop a gas supply solution for the HPP. Key components:</p> <ul style="list-style-type: none"> <li>• A buried, steel, outer diameter 355.6 mm, medium pressure (up to 6.9 megapascal (MPa)) transmission pipeline 20.1 km in length to provide a gas supply from the existing Sydney to Newcastle Pipeline.</li> <li>• A compressor station to boost gas pressure prior to transfer to a storage pipeline.</li> <li>• A buried, steel, outer diameter 355.6 mm, high pressure (up to 15.3 MPa) interconnect pipeline 1.3 km in length, providing an interface between the compressor station, storage pipeline and delivery station.</li> <li>• A buried, steel, outer diameter 1067mm, high pressure (up to 15.3 MPa) storage pipeline 24 km in total length downstream of the compressor with</li> </ul>

<sup>16</sup> [Kurri Kurri Lateral Pipeline Project \(APA Group Environmental Impact Statement\)](#)

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	<p>approximately 70 terajoules (TJ) of useable gas storage.</p> <p>Construction is anticipated to commence Q4 2022, with commissioning and operations indicatively scheduled for Q4 2023. The estimated capital investment value for the Project is approximately \$264 million.”</p> <p><b>ii) Gas storage for 10 hours operation (was 6.5 hours in FID Business Case)</b>  <i>(Comment: if were to take a day to refill the previous 6.5 hour storage<sup>9</sup>, presumably it would take 1.5 days to refill the 10 hour storage, provided gas is available)</i></p> <p>“The storage pipeline will provide around 70 TJ of useable gas storage. This will provide sufficient gas supply for the HPP to operate at full output for up to 10 hours.”</p> <p><b>iii) Snowy Hydro instructed APA to not build the gas storage to be capable of storing hydrogen</b></p> <p>“With regards to the gas storage pipeline, a significant increase in capital expenditure would be required to construct the storage pipeline for it to be capable of storing a hydrogen blended fuel. This is due to the dimensions of the gas storage pipeline, and construction materials and methods required to mitigate the increased embrittlement of pipeline material when storing a hydrogen blended fuel.</p> <p>Snowy Hydro have advised that the associated level of capital expenditure would be uneconomic, and consequently the storage pipeline will not be built to specifications that would enable it to store hydrogen blended fuel.”</p>
<b>21 May 2022</b>	<p><b>Labor wins Federal Election</b></p> <p><i>(Comment: no statements were made on KKPS. The \$700m green hydrogen conversion commitment wasn't included in the government's first budget)</i></p>
<b>7 Nov 2022</b>	<p><b>Senate Estimates<sup>17</sup></b></p> <p><b>i) First hint of delay. Not necessarily complete by end-2023</b></p> <p>Senator BIRMINGHAM: Is it still a commitment for Kurri to be complete by end 2023?  Mr Whitby (Snowy Hydro COO): That's the current program date in terms of first power from the project—not necessarily complete.  Senator BIRMINGHAM: First power from the project?  Mr Whitby: Correct.</p> <p><b>ii) Snowy Hydro working hard to achieve hydrogen readiness. Government requested a FID Business Case ahead of next budget [May 2023]</b></p> <p>Mr Whitby: With respect to hydrogen and the Hunter Power Project, we are working at the various stages that it would step through. We're working closely with the government departments to finalise that. So that's a piece of ongoing work. Really, until that piece of work is finalised, I'm not in a position to outline the detail of that, but we're working hard to achieve hydrogen readiness for the Hunter Power Project.  Senator HUGHES: I appreciate that. But before the election, \$700 million was promised, so that election commitment hasn't been upheld. Is there a reason why</p>

<sup>17</sup> [Senate Estimates, Environment and Communications Legislation Committee, 7 Nov 2022](#)

Date	Announcement/Document issued
	<p>this budget, which is supposed to be about delivering commitments, hasn't included that \$700 million?</p> <p>Senator McAllister: Because the shareholder departments are working very closely with Snowy Hydro to determine how best to meet that election commitment. We've requested that Snowy deliver the government a final investment decision business case to inform the government's decision ahead of the next budget.</p> <p><b>iii) No modifications needed for 15% hydrogen, new burners required for 30%, and are looking at 100%. KKPS is 'hydrogen-ready' for 15%</b></p> <p>Senator BIRMINGHAM: What has to be retrofitted or replaced, Mr Whitby? What scale of change are we talking about? You said burners and possibly emissions control. Can you just elaborate on those?</p> <p>Mr Whitby: Just to be clear, at 15 per cent, nothing has to be replaced. To achieve 30 per cent, as we have spelt out previously in this chamber, we have to replace the burners with modified burners. So it's not a terribly material part of the plant, but those burners will have to be replaced.</p> <p>Senator RICE: Okay. How about beyond 30 per cent? If we were going to move to 100 per cent?</p> <p>Mr Whitby: We are also looking at that. We are working through that. Again, it's premature to go into that detail.</p> <p>Senator RICE: The new government is saying that, in basically going ahead with Kurri, the difference from the old government is that it was hydrogen ready. Given all of this—that it is retrofitting to require 30 per cent of hydrogen and you haven't got the details of what would be required for 100 per cent hydrogen—is it really fair to say that Kurri is going to be built to being hydrogen ready?</p> <p>Mr Whitby: We've been quite clear about it. We've been clear that the plant effectively is hydrogen ready at 15 per cent hydrogen. It needs those burners upgraded to achieve 30 per cent. I think we've been absolutely clear on that.</p> <p>Senator RICE: So when you say hydrogen ready, it's basically only for a 15 per cent hydrogen input. So it's 85 per cent fossil fuel gas?</p> <p>Mr Whitby: Correct.</p> <p><b>iv) Will need new infrastructure to provide hydrogen to the plant</b></p> <p>Senator RICE: So how much blend would the storage pipeline be able to hold?</p> <p>Mr Whitby: The storage pipeline is only capable of holding natural gas.</p> <p>Senator RICE: So in order to actually run on hydrogen, you need a completely new bit of infrastructure to provide the hydrogen to the plant, then?</p> <p>Mr Whitby: Yes. That's correct, Senator. We are working through that with the government.</p> <p>Senator RICE: So it is not really very hydrogen ready?</p> <p>Mr Whitby: No. I wouldn't say that at all.</p> <p><b>v) Premature to speculate on where the hydrogen will come from</b></p> <p>Senator BIRMINGHAM: How is hydrogen currently, under your plans, expected to be transported to the site? Trucked? Piped?</p> <p>Mr Whitby: Again, this is speculation about the outcome of where we get to that. I think it's premature.</p> <p><b>vi) Snowy Hydro Chair asserts Snowy Hydro has the funding for HPP, including the \$700m hydrogen conversion (and Snowy 2.0)</b></p>

Date	Announcement/Document issued
	<p><i>(Comment: it is the Government that is financing KKPS and Snowy 2.0)</i></p> <p>Mr Knox (Snowy Hydro Chair): We are appropriately funded to cover our commitments both for 2.0 and for the Hunter Power Project. That's corporate funding</p> <p>Senator HUGHES: That's 2.0 and—</p> <p>Mr Knox: And the Hunter Power project. At the corporate level, we are appropriately funded—</p> <p>Senator HUGHES: But not the additional \$700 million that was promised before the election. I want to clarify, then, Minister, if I can.</p> <p>Mr Knox: Sorry to interrupt, but we have got the funding necessary to deliver on those two projects.</p> <p>Senator BIRMINGHAM: Does that mean you don't need the \$700 million?</p> <p>Mr Knox: The \$700 million is all part of the appropriate level of funding, which we have. You don't start a project without the appropriate level of funding. We have the appropriate level of funding.</p>
<p><b>13 Feb 2023</b></p>	<p><b>Senate Estimates<sup>18</sup></b></p> <p><b>i) First power delayed till May 2024, full power December 2024 (a year late) AEMO is responsible for filling the gap after Liddell closes in two months</b></p> <p>Senator CADELL: In the October-November estimates [2022], Mr Whitby, when you were here, you said that you expected a first power date of 23 December [2023]. Is that still the case? This is for whoever can answer it.</p> <p>Mr Barnes (Snowy Hydro CEO): I'm happy to answer that. In the most recent advice we've given to AEMO, we've given a number of dates that AEMO have taken the most conservative of, which is that final power will be December 2024 and first power will be as early as May 2024.</p> <p>Senator CADELL: When this project started, when were first power and final power due?</p> <p>Mr Barnes: Twelve months prior to those dates.</p> <p>Senator CADELL: I understand the reason for the timing of the plant at the beginning was to have it ready, with Liddell coming offline, and I think Liddell is coming offline in April this year. Are you working with any partners, the shareholder or anyone like that, to look at filling the gap in the summer of 2023-24, now that we won't be having this plant?</p> <p>Mr Barnes: We're not working specifically. AEMO would take responsibility to determine supply and demand.</p> <p><b>ii) Full project review underway, but 'reset' cost won't be anywhere near \$1.5bn</b></p> <p><i>(Comment: Six months later Snowy Hydro's cost was 'reset' to \$950m (31 August 2023) and subsequently to \$1.3bn (16 December 2024), for just the main plant)</i></p> <p>Senator CADELL: Under that review, are you looking at costs?</p> <p>Mr Barnes: We're doing a full project review. Obviously, it's important we get progress so that the market has power as soon as possible, which will inevitably involve a costs review.</p>

<sup>18</sup> [Senate Estimates, Environment and Communications Legislation Committee, 13 Feb 2023](#)

Date	Announcement/Document issued
	<p>Senator CADELL: What was the cost at the beginning of this project?</p> <p>Mr Barnes: The original cost was \$600 million.</p> <p>Senator CADELL: I've heard numbers potentially in excess of \$1.5 billion now. Is that pie in the sky or possible?</p> <p>Mr Barnes: It would be premature to discuss what the review comes up with, but it won't be anywhere near that number.</p> <p><b>iii) Focussed on delivering the plant to run on gas and diesel</b></p> <p><b>Review still being worked on to deliver Government promise for 30% hydrogen at commissioning, premature to comment on outcome</b></p> <p>Senator CADELL: One of the bones of contention last time in estimates was the source of the hydrogen. Have we yet located someone to supply the 30 per cent hydrogen that will burn in the plant?</p> <p>Mr Barnes: To be clear, the project review is about delivering a plant that will run on gas or diesel in 2024. The prospect for hydrogen firing is subject to a separate review process that we are working on with the shareholder.</p> <p>Senator CADELL: No, costs of making it hydrogen ready.</p> <p>Mr Barnes: It's a bit premature to say what that review will come up with. We are working with the shareholder to assess the hydrogen potential of the plant.</p> <p>Senator CADELL: To be clear, Assistant Minister, the promise going into government was this would be 30 per cent hydrogen from day one. That was the position coming into government.</p> <p>Senator McAllister: From opposition we were provided with a range of information from Snowy Hydro, in forums such as this, and we relied on that in making the commitments that we made. We're now asking Snowy Hydro to give consideration to how they will fulfil those commitments, and that's the work that Mr Barnes is referring to.</p> <p>Senator CADELL: On the evidence today, from day one in December 2024, it will not be burning 30 per cent hydrogen.</p> <p>Mr Barnes: That is still subject to the work we're doing with shareholders as to the viability of hydrogen burning and the supply chain.</p> <p>Mr Duggan (Dep Secretary, Department of Climate Change, Energy, the Environment and Water): ... Snowy Hydro is working with the government on around meeting the government's election commitment, and that's what Mr Barnes was referring to in terms of what would be required to get from the 15 per cent to the 30 per cent that the government committed to on commissioning of the Hunter.</p> <p>Senator CADELL: Forget the business-as-usual up to 15 per cent, with minor fiddling, stuff. Is the potential cost of a 30 per cent hydrogen-ready plant by the end of 2024 in excess of, or around, a \$1.5 billion figure?</p> <p>Mr Barnes: It would be premature to comment on that.</p> <p>Senator CADELL: So we go back to where we were in October-November. We've taken a plant to meet a peak of summer 2023-24 that won't be ready on time and has no business case to find hydrogen burning, and we haven't identified the hydrogen we can burn in it even if we build it. Is that correct? Are we, effectively—I think in your words—white-elephanting a needed piece of infrastructure?</p> <p>Mr Duggan: I don't think that's a representation of the evidence that's been given.</p>

Date	Announcement/Document issued
<b>28 Apr 2023</b>	<p><b>Liddell Power Station closes</b><sup>19</sup></p> <p>“AGL will today retire the Liddell Power Station in the NSW Upper Hunter region after almost 52 years of operation as it prepares to repurpose the site into an industrial renewable energy hub, including plans to build a 500 MW grid-scale battery at the site.”</p>
<b>22 May 2023</b>	<p><b>Senate Estimates</b><sup>20</sup></p> <p><b>i) Budget cost increased to \$765m, completion still December 2024</b>  Senator CADELL: What's the current budget for the Kurri Kurri project to be delivered with 15 per cent via turbines?  Mr Barnes: I think the most recent advice released by the minister's office was \$765 million, and it's still within that range.  Senator CADELL: Since January, there have been no other blowouts? We're still confident of that time frame? We're not putting ranges on that at this stage?  Mr Barnes: No, we're still looking at mid next year for commissioning, with December 2024 as completion. If anything, since you would have been at the site, Senator, there has been a hell of a lot of progress. We've two concrete slabs in place and a lot of rebar and equipment at sites, so all we've seen is progress since then. It's stopped raining, so it's made it a little bit easier!</p> <p><b>ii) Hydrogen review still being worked on, to be finished middle of 2023</b>  Senator CADELL: Originally, with some minor additional investment, it will be capable up to 30 per cent. You were doing the business case on that the last time we spoke. Is that business case done?  Mr Barnes: No, we're still working through that with shareholder departments. The next phase is to do a study with Mitsubishi Heavy Industries on the tri-fuel, because the plant already operates on gas and diesel, and it will look at whether we can operate on hydrogen as well at 30 per cent. We expect to finish that in the middle of the year.</p> <p>Senator CADELL: Good old Kurri Kurri! The hard question every time is: have we yet contracted, sourced or shortlisted a source of green hydrogen for this site to be burning 15 per cent?  Mr Barnes: No, I think that's subject to the mid-year business case review and how the industry develops, but we haven't—</p>
<b>12 Aug 2023</b>	<p><b>HPP delivers local jobs and skills</b><sup>21</sup>  <i>(Comment: the local jobs will continue for two years longer than initially estimated)</i></p> <p>“Snowy Hydro’s Hunter Power Project (HPP) is leaving a lasting impact on the local workforce, delivering approximately 600 direct construction jobs and crucial skills development for a number of high-demand construction trades.</p> <p>More than 60% of HPP workers live locally, which is part of Snowy Hydro’s</p>

<sup>19</sup> [‘AGL's Liddell Power Station closes after 52 years of operation’, AGL News Release](#)

<sup>20</sup> [Senate Estimates, Environment and Communications Legislation Committee, 22 May 2023](#)

<sup>21</sup> [‘Hunter Power Project delivers local jobs and skills’, Snowy Hydro News](#)

Date	Announcement/Document issued
	commitment to supporting communities that the company is a part of.”
<b>31 Aug 2023</b>	<p><b>‘Securing the future of critical energy transformation projects’, HPP (and Snowy 2.0) ‘reset’<sup>22</sup></b></p> <p><b>Cost increased to \$950m after a comprehensive review, but remains economic, completion ‘on-track’ for December 2024</b></p> <p><i>(Comment: no details on the revised economics of the project)</i></p> <p>“Snowy Hydro today announced the outcomes of its major projects resets, for Snowy 2.0 and the Hunter Power Project.</p> <p>The Hunter Power Project has experienced similar challenges to Snowy 2.0 and following a comprehensive review the expected cost is now \$950 million. Despite the increased cost the Hunter Power Project remains economic. Construction continues to progress on schedule, with about 460 people working on the project, which remains on track to be delivered by December 2024.”</p>
<b>31 Aug 2023</b>	<p><b>Government receives project review two days before announcing its approval for increased cost<sup>23</sup></b></p> <p><i>(Comment: a two-day turnaround for assessing the project review (for both KKPS and Snowy 2.0) and approving the continuation of KKPS with a \$350m cost increase (to be paid for by the government) seems quick. The results of the updated Corporate Plan were announced but the Plan itself weren’t released for a further two months – 25 October 2024)</i></p> <p>“The Government received the updated Snowy Hydro Corporate Plan and results of the project review two days ago. It is being made public today.”</p>
<b>23 Oct 2023</b>	<p><b>Senate Estimates<sup>24</sup> - Hydrogen review still underway, due in months</b></p> <p>Senator CADELL: Outside of that process, is there modelling still or are business cases still being developed for increased hydrogen burn at Snowy-Kurri?</p> <p>Mr Barnes: We're currently working with Mitsubishi Heavy Industries on the ability for the gas turbine to move from 15 per cent tri-fuel burning hydrogen, gas and diesel to 30 per cent, and that study is underway.</p> <p>Senator CADELL: That's been underway for some time, I think, since I've been coming here. Is there a completion date or an estimation date on that?</p> <p>Mr Barnes: I think we're doing lab trials at the moment, so we would expect to have the results of that in months.</p>
<b>25 Oct 2023</b>	<p><b>Snowy Hydro Corporate Plan issued<sup>25</sup></b></p> <p><b>Snowy Hydro supports green hydrogen, participated in Newcastle Hydrogen Hub Study</b></p> <p>“Snowy Hydro considers that green hydrogen represents an extension of its</p>

<sup>22</sup> [‘Securing the future of critical energy transformation projects’, Snowy Hydro News Release](#)

<sup>23</sup> [‘Joint media release: Snowy Hydro Corporate Plan update’, Bowen/Gallagher](#)

<sup>24</sup> [Senate Estimates, Environment and Communications Legislation Committee, 23 Oct 2023](#)

<sup>25</sup> [Snowy Hydro Corporate Plan, 2024 to 2028](#)



Date	Announcement/Document issued
	<p>successful strategy to diversify its generation assets by geography, purpose and fuel type.</p> <p>Snowy Hydro participated in the Port of Newcastle - Hydrogen Hub Pipeline/Network Feasibility Study as a key member. The study recognised the Hunter region as an ideal location for an early green hydrogen electrolyser and pipeline development. The project and infrastructure in that region provides the potential to decarbonise significant industry users, household distribution, and export, as well as support green hydrogen as a fuel for GPG.</p> <p>Snowy Hydro continues to assess green hydrogen options for use as a fuel source for GPG at various levels of blended hydrogen, including the potential for developing GPG fuelled by 100% hydrogen. Snowy Hydro has planned the Hunter Power Project to allow it to operate on hydrogen in line with the commercial availability of the fuel. The timing of HPP green hydrogen access or the development of 100% hydrogen GPG plant will be driven by the development pathway and economics of regional hydrogen production and requisite dedicated pipeline network infrastructure.”</p>
<b>7 Nov 2023</b>	<p><b>Gas lateral pipeline and on-site storage cost increased to \$450m<sup>26</sup></b>  <i>(Comment: this is the cost of construction. The final cost to Snowy Hydro will be far higher when APA adds in its profit margin, the cost of paying back the capex over the 30-year lease period, operating the compressors, and operations and maintenance)</i></p> <p>“APA Group has reached a final investment decision to build the Kurri Kurri Lateral Pipeline, connecting the Hunter Power Project to the existing Sydney to Newcastle Pipeline.</p> <p>APA previously executed a 30-year Gas Transportation and Storage Agreement with Snowy Hydro Limited on 20 June 2022. Snowy Hydro may extend the Agreement for a further 10 years. Under the Agreement, APA will build, own and operate the Kurri Kurri Lateral Pipeline, approximately 20 km in length, and a 70 TJ gas storage facility.</p> <p>Major construction will now start with all third-party approvals and development matters now finalised and agreed with Snowy Hydro, including APA’s total capex costs of approximately \$450 million.”</p>
<b>12 Feb 2024</b>	<p><b>Senate Estimates<sup>27</sup> - More likely that 30% hydrogen is possible at relatively minor cost, and not increase the ‘reset’ estimate of \$950m</b>  <b>Not sourced hydrogen yet, nor done the Business Case</b></p> <p>Senator CADELL: This is my favourite question and your least favourite question. Kurri Kurri gas peaker plant was always seeking to run with some hydrogen co-burn. Have we identified a source of green hydrogen and got a contract for it yet?  Mr Barnes: My interest is the operation of the power station—it being able to run on 15 per cent or 30 per cent green hydrogen. The good news is that it's looking more likely that 30 per cent is possible. But, no, we haven't sourced green hydrogen or signed a contract at this stage.</p>

<sup>26</sup> [‘APA Reaches Final Investment Decision on Kurri Kurri Lateral Pipeline’, APA News Release](#)

<sup>27</sup> [Senate Estimates, Environment and Communications Legislation Committee, 12 Feb 2024](#)

Date	Announcement/Document issued
	<p>Senator CADELL: Is 30 per cent possible within the funding envelope you've got and been given, or will it be an additional cost and additional side project?</p> <p>Mr Barnes: The report from Mitsubishi Heavy Industries isn't complete yet, and we wouldn't do it as part of this current construction, but it would be within Snowy Hydro's operating expense to be able to do that.</p> <p>Senator CADELL: So it would be on top of the—is it \$965 million?</p> <p>Mr Barnes: \$950 million is the current envelope.</p> <p>Senator CADELL: Okay. So it would be on top of that.</p> <p>Mr Barnes: Like I said, the report is not concluded yet, but the costs are relatively minor to convert the power station so that it can accept green hydrogen.</p> <p>Senator CADELL: Has a business case been done for it yet?</p> <p>Mr Barnes: No.</p>
<p><b>28 May 2024</b></p>	<p><b>Senate Estimates<sup>28</sup></b></p> <p><b>i) Confirmed units can run on 30% hydrogen, after some modifications</b>  <i>(Comment: the former CEO stated this 18 months earlier (25 October 2021))</i></p> <p>Mr Barnes: We've had some progress at Hunter. Mitsubishi Heavy Industries have confirmed, technically, that the plant can operate on 30 per cent hydrogen.</p> <p>Senator CADELL: As it is—without new specs?</p> <p>Mr Barnes: No. We'll have to do some modification work, but not majorly substantial.</p> <p><b>ii) Business Case/Feasibility Study still being finalised</b></p> <p>Senator CADELL: Have you scoped the business? The last questions we were asking, when we were here in February, were whether you're looking at the business case for the extra 15 per cent, to get to 30.</p> <p>Mr Barnes: We're currently finalising the feasibility study on the cost and timing of moving to 30 per cent. Mitsubishi confirmed that 30 per cent is possible. We'll feed that into the department's work on what hydrogen might look like in the Hunter.</p> <p><b>iii) Confirmed both units to be operating December 2024, but running on diesel until the delayed pipeline and storage are ready</b></p> <p>Mr Barnes: The current schedule has the plant successfully operating in December. The gas pipeline and storage facility may not be ready until early in the New Year, so we would commission on diesel initially.</p> <p>Senator CADELL: What about full power?</p> <p>Mr Barnes: Full power would be December—both units on diesel.</p>
<p><b>27 Aug 2024</b></p>	<p><b>HPP entering final phase after significant construction progress</b>  <b>Project schedule delayed due to inclement weather. Prioritising completion to produce power asap for the electricity network will increase cost</b>  <b>Completion delayed - start testing the first unit in December 2024, on diesel, and the second unit a few months later<sup>29</sup></b></p> <p>“Development of Snowy Hydro’s fourth fast-start, on-demand gas power station, the Hunter Power Project, is entering its final phase. Since the reset of HPP in August</p>

<sup>28</sup> [Senate Estimates, Environment and Communications Legislation Committee, 28 May 2024](#)

<sup>29</sup> [‘Statement: Hunter Power Project Update’, Snowy Hydro News Release](#)

Date	Announcement/Document issued
	<p>2023, there has been significant construction progress, with completion of all major civil works onsite and installation and alignment of critical turbine and generator parts.</p> <p>Extended periods of inclement weather over the past year have impacted the project's schedule. In order for HPP to be producing some power for the electricity network as soon as possible, we have prioritised schedule, which will impact the final cost.</p> <p>HPP is due to come online in December 2024, with the start of its testing and commissioning phase of one of its two generators on diesel fuel. We expect HPP to be fully operational, with both generators able to operate on both fuels, in the few months following the start of testing."</p>
<p><b>3 Oct 2024</b></p>	<p><b>HPP EIS Modification 3<sup>30</sup></b>  <b>Gas Lateral delayed till March 2025, so HPP EIS has been modified for longer diesel operation in 2025</b></p> <p>"HPP is set to begin operations in December 2024 with one generator running on diesel during the testing and commissioning phase. The second unit and gas introduction will follow shortly, with full operations expected within a few months.</p> <p>While the project's planning modification has proposed increasing diesel operating hours to 1,100 per unit for 2025, Snowy Hydro does not currently expect HPP to operate entirely on diesel in 2025. The purpose of the modification is to provide for the current anticipated completion of the gas pipeline to March 2025 plus appropriate program contingency to ensure the power station can still generate energy in the event of any further delays to the gas pipeline or to the project's commissioning program."</p>
<p><b>4 Nov 2024</b></p>	<p><b>Senate Estimates<sup>31</sup></b></p> <p><b>i) First unit testing delayed to between December 2024 and April 2025</b>  Senator CADELL: I'll go to the Kurri Kurri site first. You said one generator is to start very soon. How soon is very soon?  Mr Barnes: We've provided information to AEMO, which is public and includes a date range of 21 December to the end of April.  Senator CADELL: So there's no certainty we'll make December like we said we would.  Mr Barnes: We're still targeting December for first testing of that first unit. It's a complex project when you get to the end, and we're obviously trying to schedule it in the best way possible.</p> <p><b>ii) Applied to run on diesel for 2025 due to delays in gas infrastructure</b>  Mr Barnes: The environmental approval for Hunter in steady-state operations is to operate 1,150 hours a year, maximum. And 10 per cent of that is allowed to be on diesel. Because gas won't be available until what we believe now to be the first week</p>

<sup>30</sup> [‘Hunter Power Project – Planning Modification Amendment’, Snowy Hydro News Release](#)

<sup>31</sup> [Senate Estimates, Environment and Communications Legislation Committee, 4 Nov 2024](#)

Date	Announcement/Document issued
	<p>of March, we've applied for a temporary relief on that constraint on diesel. But we would expect to be running on diesel only in commissioning and only for a number of weeks.</p> <p><b>iii) Confirmed can run on 30% hydrogen, at a modification cost of \$75m</b>  Senator CADELL: My lovely question is: have we sourced any hydrogen for burning green hydrogen at the plant as per the site?  Mr Barnes: We've not conducted any activity to source hydrogen. What we have confirmed with Mitsubishi heavy industry formally now is that the plant can run on 30 per cent hydrogen with some modifications to the plant.  Senator CADELL: How much are those modifications?  Mr Barnes: They're in the order of \$75 million.  Senator CADELL: Per generator?  Mr Barnes: No, for the whole plant.</p> <p><b>iv) Hydrogen Business Case not finished, no progress on supply</b>  Senator CADELL: Is there a business case being prepared for that?  Mr Barnes: We've not provided advice to shareholding departments yet on the 30 per cent, and that would be with the departments to determine what to do next.</p> <p>Senator CADELL: Okay. External factors not your control, Origin pulling out of the Hydrogen Hub in the Hunter, is that going to have effects on what you estimate supply when you can start burning hydrogen?  Mr Barnes: We have not done any estimations on supply.</p>
<b>13 Nov 2024</b>	<p><b>HPP EIS Modification 3 withdrawn<sup>32</sup></b>  <i>(Comment: the EIS modification for longer diesel operation was withdrawn, 6 weeks after it was submitted. In reality, the continual delays in the construction of the main plant eventually extended beyond the completion of the gas supply infrastructure, even though it too was late, but only by six months)</i></p> <p>“After receiving stronger assurance from the pipeline developer regarding completion of the gas supply infrastructure, SHL is no longer proceeding with the modification and withdraws the request.”</p>
<b>16 Dec 2024</b>	<p><b>Testing and commissioning started<sup>33</sup></b></p> <p><b>i) Further delays. First unit now operational by April 2025 and full commercial operation of both units by June 2025, or sooner</b>  <i>(Comment: the testing that has started is on the gas infrastructure, not the main plant)</i></p> <p>“Testing and commissioning of Snowy Hydro’s fourth fast-start, on demand gas power station has now begun. This first phase of commissioning involves pressure testing HPP’s approximately 23 kilometre network of pipe infrastructure that will deliver gas, diesel and water to the station’s generators.</p> <p>Pending a smooth process, the first turbine and generator is expected to reach full</p>

<sup>32</sup> [Hunter Power Project: Modification 3 Withdrawn, Snowy Hydro letter, 13 November 2024](#)

<sup>33</sup> [‘Hunter Power Project Update’, Snowy Hydro News Release](#)

Date	Announcement/Document issued
	<p>commercial operation by the end of April 2025. Commissioning of the second turbine and generator will follow, with commercial operation of both turbines and generators expected by the end of June 2025. Depending on commissioning outcomes, there is a possibility of either turbine being available to provide some power to the grid sooner.”</p> <p><b>ii) Cost increased to \$1.3bn, to minimise delays in power production</b>  <i>(Comment: the increase to \$1.3bn (\$350m more than the ‘reset’ estimate and \$700m more than the initial estimate), was disclosed in one sentence of a nondescript Project Update. The latest cost increase is to produce power asap)</i></p> <p>HPP has experienced extended periods of extreme weather and other factors that have stopped work on the project, impacting its timeline. As flagged in the August 2024 project update, HPP’s cost has been impacted in order to minimise the delay in its completion, so HPP can produce power for the network as soon as possible.</p> <p>Prioritising power availability means the final cost of HPP is expected to be around \$1.3 billion, dependent on a smooth transition to commercial operation without delays from weather or other factors.</p> <p><b>iii) Economic benefit increased to \$914m (from \$531m at FID)</b>  <i>(Comment: no information provided on the derivation of this claim and how the benefit has increased more than the cost)</i></p> <p>Despite the change in cost, the strength of HPP’s economic benefit has increased. HPP’s net present value (NPV), has increased to \$914 million from \$531 million at the March 2021 final investment decision.”</p>
<p><b>24 Feb 2025</b></p>	<p><b>Senate Estimates<sup>34</sup></b></p> <p><b>i) Completion now June 2025</b>  Mr Barnes: I'll start with the Hunter Power Project, which has experienced more than 200 days of productivity loss due to weather and some other factors. One year after we reset that project, it was apparent that these weather impacts could not be absorbed into the schedule and, in August last year, we released the project update that made it clear there would be a schedule and cost impact. The new target cost is \$1.3 billion, with full commercial operation of 30 June this year. Pleasingly, commissioning is well underway.  The current status is that we started commissioning in December. We expect unit 1 to be exporting to the grid in April and unit 2 in June, with all of the balance of plant tied in a bow by the end of June.</p> <p><b>ii) Increase from \$900m to \$1.3bn could not have been foreseen</b>  Senator CADELL: It's interesting, because on the reset you've beaten me. When the plant was originally \$600 million and went up to \$950 million, I put to you that I was hearing numbers up to \$1.4 billion or \$1.5 billion, and you said it was nowhere near that. I just worked out you'll have beaten me by \$25 million if it comes in at \$1.3</p>

<sup>34</sup> [Senate Estimates, Environment and Communications Legislation Committee, 24 Feb 2025](#)

Date	Announcement/Document issued
	<p>million plus \$75 million [for modifications for 30% hydrogen]. That's near that, though, isn't it?</p> <p>Mr Barnes: At the time you were asking me those questions, the impact of the weather and other factors hadn't become evident at that point, so there was no reason to believe it would go over the revised target cost.</p> <p><b>iii) Hydrogen assessment is with the department. Snowy Hydro not assessing supply chain</b></p> <p>Mr Barnes: We're not currently assessing the supply chain for hydrogen. We've done the assessment of the technical feasibility at site, and that's with the department.</p> <p>Senator CADELL: But you've got to buy it to burn it in the plant. Have we found anyone to sell us green hydrogen?</p> <p>Mr Barnes: My team are not currently assessing that supply chain.</p>
<b>23 Mar 2025</b>	<p><b>Hunter units registered in AEMO MMS System at 375 MW capacity each</b>  <i>(Comment: does this mean the nameplate capacity of KKPS is 750 MW, not 660 MW)</i></p>
<b>4 Jul 2025</b>	<p><b>‘Albanese Government backs renewable boost to Hunter Valley’, Media Release<sup>35</sup>, Chris Bowen, Sharon Claydon (Member for Newcastle)</b>  <b>Government provides \$432m for Newcastle Hydrogen Hub, but doesn’t involve KKPS supply</b></p> <p>“The Albanese Government is securing Australia's energy future with a Hydrogen Headstart investment in Orica's Hunter Valley Hydrogen Hub. Located on Kooragang Island in the heart of the Hunter Region, the project will deploy a 50 MW electrolyser powered by renewable energy, producing around 4,700 tonnes of green hydrogen each year.</p> <p>By switching from gas to green hydrogen, the project will also significantly cut emissions from Orica’s ammonia production facility and help produce green ammonia for domestic use across mining, agriculture and manufacturing sectors.</p> <p>This \$432 million announcement follows the \$814 million awarded to Copenhagen Infrastructure Partners’ Murchison Green Hydrogen Project in Western Australia earlier this year. Together, these two landmark investments mark the conclusion of Hydrogen Headstart Round 1.”</p>
<b>7 Jul 2025</b>	<p><b>Further delays. Full commercial operation expected in coming months after firing up of first unit last week. Name change to Kurri Kurri Power Station. Capacity still stated as 660 MW. Cost within target of “around \$1.3bn”.<sup>36</sup></b></p> <p>“Commissioning of Snowy Hydro’s fourth on-demand gas power station has achieved a significant milestone, with the HPP team successfully firing up one of the station’s two class-leading gas turbines late last week. Snowy Hydro’s Chief Executive Officer Dennis Barnes said ‘first fire’ is an important milestone, which involves the gas turbine igniting and reaching full speed for the first time.</p>

<sup>35</sup> [Joint media release: Albanese Government backs renewable boost to Hunter Valley, Chris Bowen, Sharon Claydon \(Member for Newcastle\)](#)

<sup>36</sup> [‘Kurri Kurri Fires up for the First Time’, Snowy Hydro News Releases](#)

Date	Announcement/Document issued
	<p>To be known as Kurri Kurri Power Station in operation, the project's gas supply infrastructure is now complete. The station is expected to reach full commercial operation in coming months after experiencing several periods of heavy rain over the past year.</p> <p>Designed to run only for a minority of the time, when electricity demand is high and renewable generation is limited, Kurri Kurri Power Station will have capacity to provide a significant 660 megawatts of power to the grid. This will help reduce pressure on electricity prices, avoid blackouts and cut around five million tonnes of carbon dioxide-equivalent gas emissions annually.</p> <p>Kurri Kurri Power Station remains on track to be delivered within its target cost of around \$1.3 billion.</p>
10 Jul 2025	<p><b>'Snowy Hydro apologises for burning diesel smell from Kurri Kurri power plant'<sup>37</sup></b>  <b>Testing stopped after plumes of diesel smoke and odour emissions</b></p> <p>"The CEO of Snowy Hydro has apologised to residents in the NSW Hunter region, who reported smelling a strong diesel odour earlier this week. The company says it was testing running the plant on diesel as part of its commissioning process. Snowy Hydro has halted the testing, while it and the Environment Protection Authority investigate further.</p> <p>CEO Dennis Barnes said in the past week, testing took place on one of two turbines, which included testing it on diesel. "That caused some emissions and some odour, which we're deeply regretful for. We weren't expecting it, and therefore we've stopped."</p> <p>Witnesses reported seeing plumes of smoke coming from the plant, while others more than 30 kilometres away in Newcastle reported the smell."</p>
18 Jul 2025	<p><b>Testing about to recommence on first unit<sup>38</sup>. Expected to take 6 to 8 weeks</b></p> <p>"Kurri Kurri Power Station will recommence testing of the first of its two gas generators on 21 July 2025. This phase of testing will use gas, which is the generator's primary fuel and expected to cause substantially less plume and odour than recent diesel testing.</p> <p>Testing will be undertaken at night and is expected to take 6 to 8 weeks. Improvements to noticeable emissions and odour are expected each week as the commissioning process progresses.</p> <p>Kurri Kurri Power Station will play an important role in preventing blackouts and enabling Australia's decarbonisation. It will provide 660 megawatts of electricity when it's needed most, allowing more wind and solar generation to enter the grid."</p>

<sup>37</sup> ['Snowy Hydro apologises for burning diesel smell from Kurri Kurri power plant', ABC News](#)

<sup>38</sup> ['Kurri Kurri Power Station Testing Update', Snowy Hydro news Release](#)



Date	Announcement/Document issued
<b>27 Jul 2025</b>	<p><b>First power generated 27 July 2025<sup>39</sup>. Testing up to 375 MW</b></p> <p>“First operations at the HUNTER1 unit (at the Kurri Kurri peaker plant) was spotted on Sunday 27th July 2025.</p> <p>We see that the unit’s been bidding down to –\$1,000/MWh during many overnight periods in order to achieve test running periods up close to its Maximum Capacity of 375MW.”</p>
<b>21 Aug 2025</b>	<p><b>Further delays<sup>40</sup>. Testing progressing on first unit, continuing into September To minimise plume and odour, will start on gas before switching to diesel</b></p> <p>“Testing and commissioning of Kurri Kurri Power Station continues to progress. In recent weeks, we have tested using gas and have successfully started providing electricity to the grid. To complete commissioning, it is important that we finalise our first generator’s testing on diesel.</p> <p>Testing will recommence on Sunday 24 August, and will continue over a two to three week period.</p> <p>We understand testing in July on the back-up diesel fuel generated visible emissions and an odour that caused discomfort and concern. Working with the manufacturer, we have identified the best approach to minimise the plume and odour caused when testing on diesel. This involves starting the generator using gas, and then switching to diesel.</p> <p>Kurri Kurri Power Station will play an important role in preventing blackouts and enabling Australia’s decarbonisation. It will provide 660 megawatts of electricity when it’s needed most, allowing more wind and solar generation to enter the grid. It will operate using gas as its primary fuel, with diesel only being used as a backup.”</p>
<b>2 Sep 2025</b>	<p><b>'Hydrogen on hold as green fuel sidelined in major gas plants', The Australian<sup>41</sup> Government states green hydrogen not yet commercial. Several years away, no official timeline</b></p> <p>“The first NSW gas plants built in a decade have shelved ambitious deadlines for delivering green hydrogen in the latest setback for the maligned clean fuel source battling cost challenges and insufficient customer demand.</p> <p>While EnergyAustralia’s Tallawarra B gas peaking plant was set to start blending green hydrogen into the energy mix this year, the electricity giant has now delayed the timeline for introducing renewable supplies by at least two years until 2027.</p> <p>The federal government-owned Snowy Hydro planned to originally run its Kurri Kurri gas facility on 15 per cent hydrogen once the plant started up with the power station positioning itself as a key project for the transition from coal to renewables.</p>

<sup>39</sup> [‘Commencement of \(testing\) operations at Hunter \(Kurri Kurri\) GT in NSW’, WattClarity](#)

<sup>40</sup> [‘Kurri Kurri Power Station Update’, Snowy Hydro News Release](#)

<sup>41</sup> [‘Hydrogen on hold as green fuel sidelined in major gas plants’, The Australian](#)

Date	Announcement/Document issued
	<p>The Albanese government pushed for an even stronger ambition with 30 per cent hydrogen on start-up and 100 per cent by 2030, a key point of tension with former Snowy boss Paul Broad. However, Snowy will need to spend an extra \$75m to modify the existing plant to accommodate hydrogen, with sources pointing to such a commitment being several years away. No official timeline is currently set.</p> <p>The delay follows a reality check by Energy Minister Chris Bowen who told The Australian this week that gas would be needed for industrial processes for “some time to come” given green hydrogen was not yet commercial.”</p>
<b>15 Sep 2025</b>	<p><b>Chris Bowen talks down green hydrogen power generation role<sup>42</sup>, The Australian</b>  <i>(Comment: the government concedes that KKPS will not run on green hydrogen, in line with Snowy Hydro’s initial view (4 August 2021) that it is neither viable nor available)</i></p> <p>“Chris Bowen has downplayed the potential of green hydrogen as a future source of zero-emissions electricity. Mr Bowen on Sunday revealed that controversial green hydrogen may only play a “niche” role in power generation because renewables backed by batteries were “cheaper and better”.</p> <p>Amid growing concerns about high costs and <a href="#">investor confidence in green hydrogen</a>, Mr Bowen on Sunday said he was “bullish” about the zero-emissions fuel eventually replacing gas for manufacturing processes. But he has talked down the role of green hydrogen in future electricity generation, despite unveiling a plan before the 2022 election for the Kurri Kurri gas plant to be fully hydrogen by 2030.</p> <p>“Green hydrogen is always about heavy industry,” Mr Bowen said.</p>

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<sup>42</sup> ['Labor, Green voters want stronger climate action, as Chris Bowen talks down green hydrogen power generation role', The Australian](#)