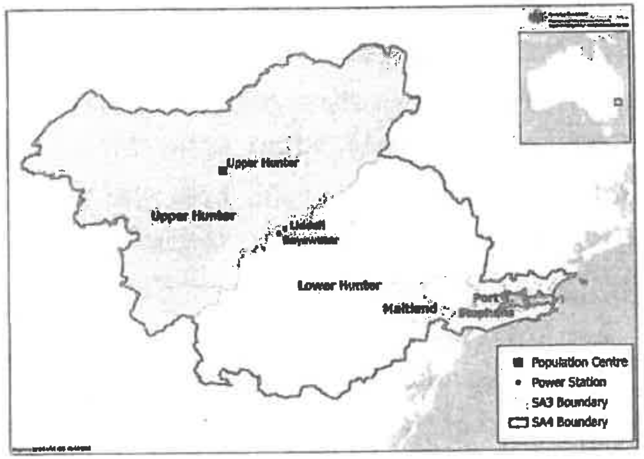
ESTIMATED IMPACTS OF CFPS AND ASSOCIATED COAL-MINE CLOSURES:

UPPER HUNTER

MAP – UPPER HUNTER AND HUNTER VALLEY



• POWER STATION: LIDDELL, BAYSWATER[1]

Station	Liddell	Bayswater
Owner	AGL Energy	AGL Energy
Announced closure date	2022-23	2030-33 (brought forward from 2035)
Contribution to NEM	8% NSW capacity 10% NSW capacity ~13% NSW generation in 2021	13% NSW capacity 18% NSW dispatchable capacity ~23% NSW generation in 2021
Emissions	981kg/MWh	889kg/MWh
Coal supply	Multiple, including Peabody's Wilpinjong, BHP's Mount Arthur and Glencore's Mangoola mines	Multiple, including Peabody's Wilpinjong, BHP's Mount Arthur and Glencore's Mangoola mines

ESTIMATED IMPACTS: UPPER HUNTER (SA3)[2]

Total direct jobs impacted(unemployment rate)	520 (6.7ppt)
Median weekly income ($): FFEG + Coal Mining Other Industries	 $2,000-$2,999 $300-$399
Total income loss ($m) (% of taxable income)	$33m (3.0%)
Total household consumption loss	$4m
Indirect jobs impacted (nationally)	268
Gross Value Added (GVA) loss (national)	$102 million

BROADER CONTEXT: HUNTER VALLEY (SA4)

Indicator	Hunter Valley Exc Newcastle (SA4)	NSW	Australia
Population, as at 30 June 2021[4]	292,906	8,093,815	25,688,079
Population AAGR, over 5 years[5]	1.7%	0.9%	1.2%
Median age[6]	40	39	38
Unemployment rate[7]	4.1%	3.4%	3.5%
Youth unemployment rate[7]	8.8%	8.5%	8.4%
Participation rate[7]	58.8%	65.9%	66.6%
Proportion of residents with a low index of education and occupation[8]	57%	26%	27%
Median household income weekly[6]	$1,557	$1,829	$1,746
Number employed[7]	129,930	4,278,472	13,589,926
Work in fossil fuel generation and coal mining (persons and per cent, POW), 2021[9]	10,250 9.12%	22,004 0.63%	56,253 0.47%
Employment growth 5 year AAGR[7]	0.6%	2%	2%
Structural change index[10]	13.8	3.6	3.2
Internet vacancy index[11]	2,800	97,100	305,700

OVERALL ANALYSIS

- Liddell closed one unit in April 2022 and expects to close the remaining units in April 2023 and convert the site into the Hunter Energy Hub. In 2016, **44% of the 562 people who worked at the power stations were residents of Upper Hunter.** Furthermore, 2035 residents worked in coal mining - the overwhelming majority exporting but considered to be in decline over the longer term.

- **Upper Hunter (SA3) contributes 11.1% of the SA4 labour force[3], which has a below average labour market.** The closures could have a significant impact – **with an estimated increase in the unemployment rate of 6.7 percentage points (the largest for all CFPS regions),** the fourth largest reduction in income within an SA3 of at least $33m (3% of the region's taxable income), and related reduction in consumption of $4m. The region is also expected to be affected by closures of power stations in nearby Lake Macquarie-West and Wyong occurring by 2030. With transitioning workers likely competing for similar employment opportunities - particularly in the new energy, manufacturing and agriculture sectors. In the short term, these impacts are being minimised with AGL planning the Liddell closure over 7 years and committing to no forced redundancies.

- In March 2022 the Upper Hunter Economic Diversification Committee released the ***Upper Hunter Diversification Action Plan***. The closure of Liddell and Bayswater presents **an opportunity to redirect one quarter of the region's licenced water and 10,000 hectares of strategic land** and infrastructure to: expand existing agribusiness - especially in equine; foster industrial hemp and protected cropping; and provide the business case for processing facilities. There are also significant opportunities to leverage existing transmission infrastructure, research institutions, Mining Equipment, Technology and Services, and heavy industry. **The Hunter Renewable Energy Industrial Precinct** proposal aims to leverage these qualities. The NSW Government has also identified Hunter as one of two locations for Clean Manufacturing Precincts. AGL has secured planning approval to build a grid-scale battery on the Liddell site, beginning the proposed transition to the Hunter Energy Hub. The project expects to generate 100 construction jobs and $763 million of investment.

- The ***Hunter Regional Plan 2036*** aims to strengthen the region's economic resilience and build on existing strengths to foster greater market and industry diversification. Legislation passed for the **Resources for Rejuvenation program** includes the establishment of expert panels from the community to advise on spending of the $25 million/year.

Sources and definitions:

1.DCCEEW (2022)

2. Jobs impacted in CFPS and coal mines: National Pollutant Inventory 2020/21; Woodmac Q2 2022. Results are based on the:

   a) sudden and concurrent closure of all power stations with no planning or assistance and loss of all direct jobs

   b) inclusion of coal mine employees when their mine supplies solely to the domestic market. For all other coal mines it is assumed they will be able to expand exports to offset reduced demand domestically

   c) assumption that the contractor workforce is the same size as the employed workforce unless figures are known (noting that this will be tested with industry to inform further analysis).

   d) loss of 30% income for CFPS and associated coal mine workers working at the sites in these regions

   e) reduction in household spending by 9% in the year of unemployment

   Results may be overestimated due to the nature of input output modelling, the reality that a number of workers may choose to return and that some workers will be retained to decommission, repurpose or rehabilitate sites.

3. Estimated based on National Skills Commission 2022, Small Area Labour Markets March Quarter 2022 (for SA3) and ABS Labour Force, Australia, Detailed (RM1) (for SA4). Represents year to March 2022.

4. Australian Bureau of Statistics (ABS) 2022, Regional Population, July 2022.

5. Average Annual Growth Rate (AAGR), Regional Population from June 2016 to 2021.

6. ABS 2022, 2021 Census of Population and Housing.

7. ABS 2022, Labour Force, Australia, Detailed (RM1), to August 2022. Australian and States/Territories are seasonally adjusted; SA4 are 12 month average (for the youth unemployment rate, State/Territory figures are also 12 month average).

8. ABS, Census 2016, Socio-Economic Indexes for Areas (SEIFA) Index of Education and Occupation. A low score indicates relatively lower education and occupation status of people in the area in general.

9. ABS 2022, 2021 Census of Population and Housing, by Place of Work (POW)

10. Structural Change Index (SCI) is based on changes in industry employment shares across regions from 2016 to 2021, with the higher the number the greater the degree of industrial change. Based on 3yr average.

11. National Skills Commission, Internet Vacancy Index, September 2022, 3-month averages of original data. Please note: The quality of fit between the IVI regions and SA4s varies significantly. Job vacancy analysis at the SA4 level should be interpreted with caution.