

Silverton Wind Farm

Community Consultative Committee
Meeting No.CCC-032

Thursday, 23 May 2019



Powering
Australian
Renewables
Fund



Agenda

1

Welcome

2

Previous
minutes

3

Project update

- Overview
- Wind Farm Works
- Commissioning

4

Community
relations
update

5

Topics of interest

- Weekly Generation Performance
- Silverton Wind Forecast
- Rehabilitation Works
- Daydream Mine Road
- WTG40 gearbox oil spill

6

Other
business



1. Welcome



2. Previous minutes

2. Previous minutes

Action items



Item	Action	Status	Who
3.23.16	AGL to contact Rod Grenfell in relation to erecting a fence along Daydream Mine Road near the Umberumberka pipeline access.	Open	AGL – 3/19
4.25.07	AGL to progress the 20m monopole with Telstra and Crown as part of the mobile reception program and contact AW to discuss the proposed solution.	Open	AGL – 3/19
3.26.25	AGL will continue to liaise with Telstra to avoid any impacts to N Schmidt's tower	Open	AGL – 3/19
4.28.08	AGL noted advice from our local landscaper that the best time for planning was in Aug/Sept to avoid frost shock. We will continue to work with the supplier in relation to timing to ensure the best success for the screening. AGL noted that the landscaper has already visited three properties.	Open	AGL – 12/18
4.28.04	AGL to provide a roadmap / timeline for the Mobile Reception Program	Open	AGL – 12/18
5.28.03	CCC member raised the potential of utilising the Silverton Wind Farm to attract tourism into the region. Discussion amongst the CCC and community considered the benefits and noted the concerns in relation to access on private property. AGL to liaise with the relevant stakeholders (lease holders, SVC, NSW Crown) and comment.	Open	AGL – 12/18
4.31.01	AGL to consider closing dated and application requirements for Silverton Community Fund for 2019	Open	AGL – 3/19
4.31.02	AGL to advise of timing for delivery of O&M materials.	Open	AGL – 3/19

- Overview
- Wind Farm Works
- Connection Works



3. Project update

3. Project update

Silverton Wind Farm



Silverton Wind Farm

- Located in the Barrier Ranges approximately 5km north of the Silverton township
- Owned by the Powering Australian Renewable Fund (PARF)
- Generation capacity of 200 MW
- Wind turbines: 58 x GE 3.43-130
- Annual Energy Production (AEP)
 - ~780,000 MWh (capacity factor of 44.5%)
 - Powering more than 137,000 average Australian homes
- Connects into TransGrid's existing 220 kV substation at Broken Hill
- Design life of 25 years



3. Project update

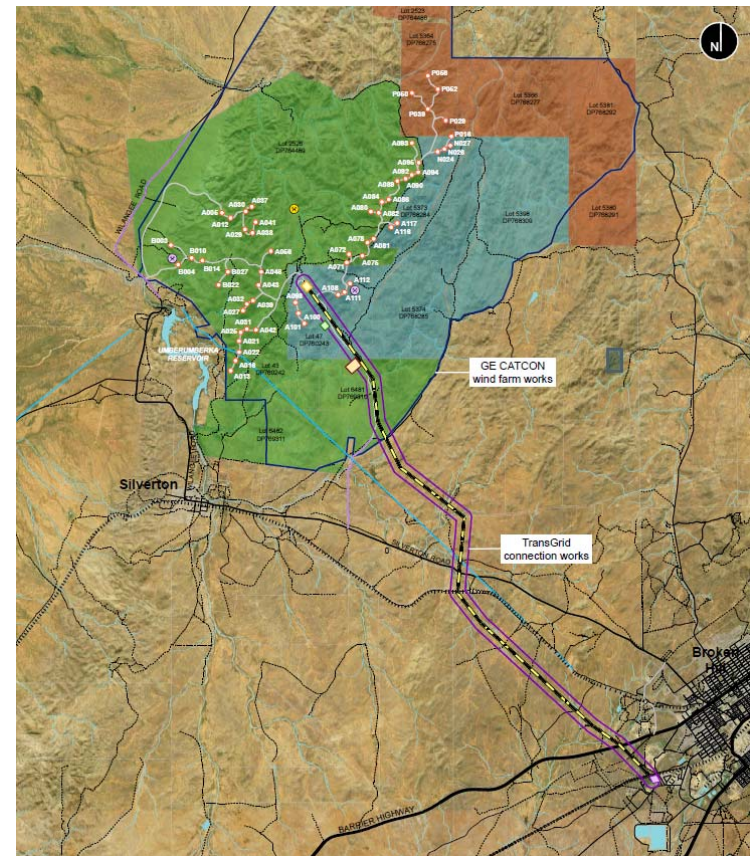
Silverton Wind Farm



Scope of works

- Silverton Wind Farm consists of two main scope of work:
 - Wind Farm Works (GE-CATCON)
 - Connection Works (TransGrid)
- AGL has prepared an Overview Environmental Management Strategy (OEMS) in accordance with the project approval
- Overview activities include
 - Community enhancement
 - Community consultative committee
 - Project website

<https://www.agl.com.au/about-agl/how-we-source-energy/renewable-energy/silverton-wind-farm>



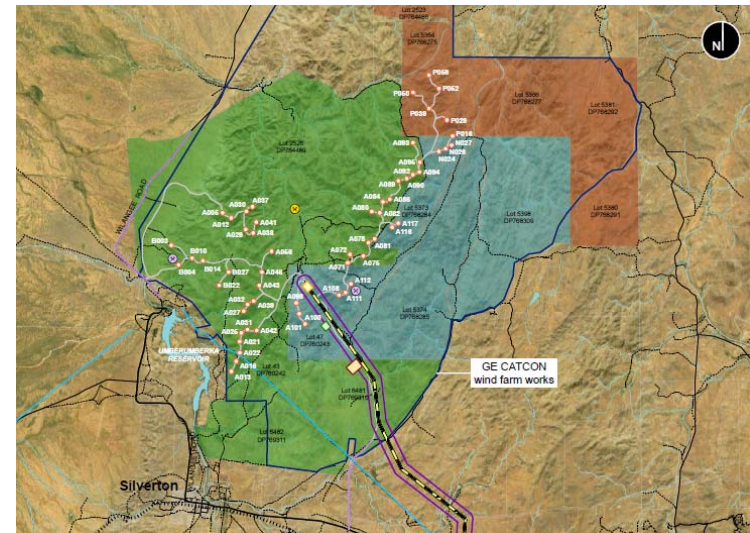
3. Project update

Silverton Wind Farm



Wind Farm Works

- GE-CATCON (joint venture) has been engaged to deliver the wind farm works
 - Engineer, Procure, Construct (EPC) Contract
- Scope of works, includes
 - 58 x GE 3.43-130 wind turbines
 - 33kV electrical reticulation (underground and overhead) and 33kV switchyard
 - Site access roads and O&M buildings
- Key project milestones (following previous CCC)
 - All wind turbines are mechanically complete.
 - All wind turbines are commissioned.
 - Night-time generation increased to 131 MW (38 x WTGs)
- AEMO commissioning
 - AEMO PSCAD modelling due diligence will enable night-time generation to increase to maximum output following approval of AEMO hold point 4 report.



3. Project update

Silverton Wind Farm



Connection Works

- TransGrid has achieved Practical Completion on 20 February 2018
 - Existing Broken Hill 220kV substation (connection point)
 - 220kV transmission line
 - Wind farm 220kV substation
- Connection works were successfully energised on 23 Feb 2018.
- TransGrid's Project Director summed up the milestone well:
 - **“It has been a challenging job but a great effort by a lot of people”**



3. Project update

Wind Farm Works



Construction works

- Wind turbines erection:
 - WTG erection complete: 58/58 (100%)
 - WTG mechanical completion: 58/58 (100%)
- Wind turbines commissioning:
 - WTG commissioned: 58/58 (100%)

Installation of the final blade to WTG48 on Wednesday afternoon, 27 February 2019.



3. Project update

Wind Farm Works



Construction works – Progress photos



3. Project update

Wind Farm Works



Wind Turbine Commissioning

- The wind farm is currently being commissioned in accordance with the AEMO commissioning plan which involves coordination with AEMO and TransGrid (NSP).
 - AEMO – Australian Energy Market Operator
 - NSP – Network Service Provider
- Commissioning status:
 - All WTGs have been mechanically complete and are commissioned
 - WTG reliability testing completed (10d): 35/58 (~60%)
 - WTGs generating (day-time): 13/58 (~22%)
 - WTGs generating (night-time): 38/58 (~66%)
- Wind turbines will commence generating after being commissioned subject to the AEMO commissioning plan and any network constraints.



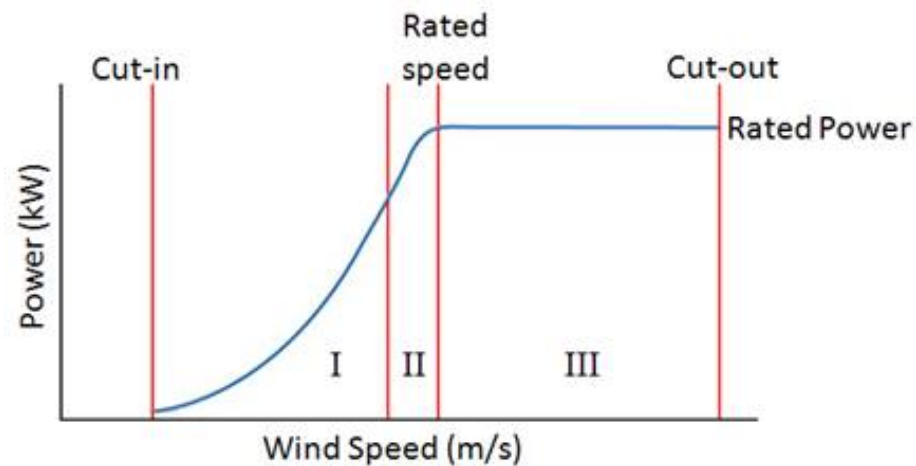
3. Project update

Wind Farm Works



Wind Turbine GE 3.43-130

- GE 3.43-130 Power Curve
 - Cut in wind speed – 3 m/s
 - Rated wind speed – 13 m/s
 - Cut out wind speed – 25 m/s



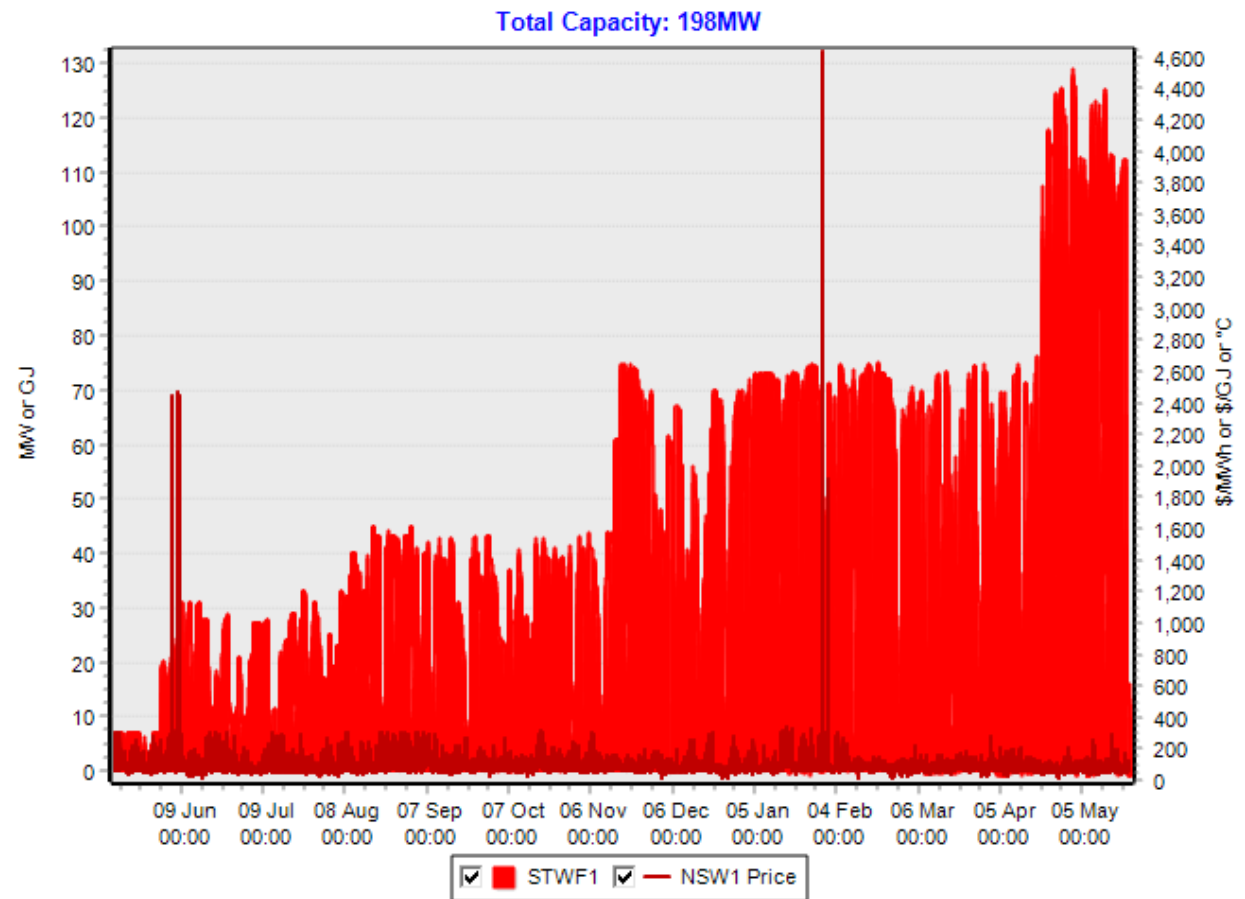
3. Project update

Wind Farm Works



First Generation

- First generation occurred from the Silverton Wind Farm (STWF) on Saturday, 12 May 2018 at 23:30 hrs
- Generation from the Silverton Wind Farm (STWF) as at Tuesday, 19 February 2019.
 - 208,000 MWh
 - Already powering approximately 36,500 average Australian homes (based on their annual consumption).



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3. Project update

Wind Farm Works



Local Industry Participation

- Currently ~30 construction workers with approximately 40% from the local area.
 - Continued reduction in the number of construction workers.
 - Local component mainly associated with the operation and maintenance of the wind turbines.



3. Project update

Wind Farm Works



Local suppliers

- Delivery of the Silverton Wind Farm to date has involved the following local suppliers / contractors
 - Attards Transport
 - Barrier Daily Truth
 - Boss Construction
 - Broken Hill City Council
 - Broken Hill Hire & Engineering Services
 - Broken Hill Mini Excavators
 - Broken Hill Nissan
 - Broken Hill Skip Bins
 - Broken Hill Supplies
 - Cresswell Drilling
 - Getting There Excavations
 - Globe Timber Mills & Joinery
 - Goodyear Autocare
 - Hire vehicles – Avis and Hertz
 - Interhealth Broken Hill
 - Judd Plumbing
 - Lawrence Engineering
 - Mawsons Concrete & Quarries
 - My Maid Support
 - RPF Resources & Rural Supplies
 - Schembri Earthmovers
 - Silver City Plumbing
 - Silver Haven Motor Inn
 - Silverton Civil
 - Silverton Hotel / Sturt Motel
 - Solcon Trading
 - SouthState Industrial Supplies
 - Tasco Petroleum
 - Vertex Power & Process



4. Community relations update

4. Community relations update

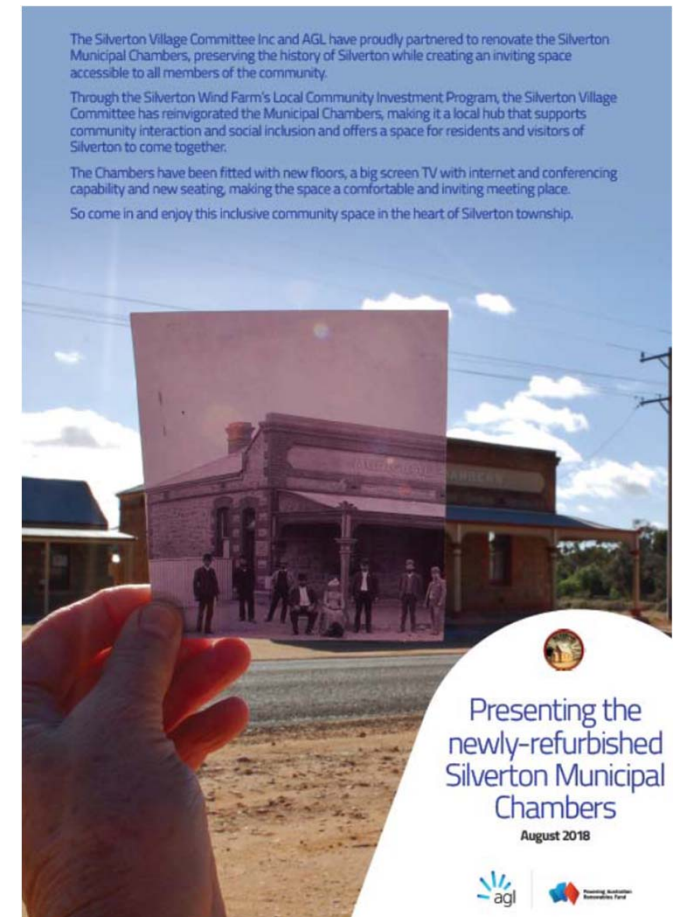
Community enhancement program



Community Enhancement Program

The Community Enhancement Program for the Silverton Wind Farm is progressing, in accordance with condition 18 (schedule 2) of the project approval. We are implementing the program to give effect to the commitments in Appendix 3, including:

- **Silverton Community Fund**
 - \$15,000 per year + CPI (life of project): Mar 2019 application(s) – Penrose Park Trust (tennis court improvements)
- **Solar Silverton Program**
 - 5kW solar PV for leaseholder and residences within 10 km of project.
- **Water tank program**
 - Domestic sized water tank to all inhabited residences
- **Mobile reception program**
 - Contribution of up to \$50,000 for mobile reception improvement works



4. Community relations update

Community enhancement program



Silverton Solar Program

- To date, AGL has provided solar panels to 30 property owners and 23 of these properties have received their smart meters and are “operational”.
- Origin, Red Energy and Acumen are generally the energy retailer and meter provider in the area and will be managing meter upgrades.
- AGL is continuing to follow-up with the relevant energy retailers in relation to the two outstanding meters to be upgraded.



4. Community relations update

Community enhancement program



Water Tank Program

- AGL is progressing supply, installation and connection of a domestic sized water tank (10,000L)
 - Water tank supply → Landmark
 - Installation and connection → Broken Hill Plumbing Services
- Rolling installations started in August/September 2018 and 26 property owners have received their water tanks.
- Broken Hill Plumbing will continue contacting property owners to arrange for inspections and installations over the next few weeks.



Capacity: 10000 L

Inlet Height: 1.49 m

Diameter: 3.08 m

Total Height: 1.7

State Available: ACT, NSW, NT, SA, VIC

Available Colours



4. Community relations update

Community enhancement program



Mobile Reception Program – Black Spot Funding

- On 18 March 2019, the Minister for Regional Services, Senator the Hon Bridget McKenzie, announced the results of the Round 4 competitive assessment process, including the Silverton small cell.
- AGL is liaising with Telstra to upgrade the blackspot solution through the contribution of the \$50,000 allocated for mobile reception improvements works.
- This should simplify the approval process and implementation of the works which are schedule to be operational by 30 June 2020.

<https://www.communications.gov.au/what-we-do/phone/mobile-services-and-coverage/mobile-black-spot-program>



A typical 20m monopole with an omni antenna configuration

4. Community relations update

Visual impact mitigation



Visual Impact Mitigation

AGL issued notification to the Silverton residents in accordance with condition 2 (schedule 3) of the project approval in relation to the visual impact mitigation measures outlined in condition 1 (schedule 3).

- Owners within 6km of any wind turbine forming the Silverton Wind Farm may request additional visual mitigation measures (such as landscaping and vegetation screening) at their residence to reduce visual impact of the wind turbines.
- Owners have the right to request the implementation of these additional visual mitigation measures at their residence at any time within 3 years of the commencement of construction.
- Landscaper has started viewing properties in the area to discuss most appropriate measures
- Timing for sourcing and planting vegetation and maintenance must be considered

The identification of appropriate visual impact mitigation measures will be easier following the construction of the wind turbines.



4. Community relations update

Silverton Sunsets Music Festival



ABC NEWS

Home Just In Australia Votes World Business Sport Science Health Arts Ana

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Regional tours and country music festivals bringing the bush to life

ABC Broken Hill By Aimee Volkofsky

Posted 1 Mar 2018, 1:34pm



PHOTO: A couple dancing in the rain at the Silverton Sunsets music festival. (ABC News: Aimee Volkofsky)

In an era of stadium gigs and mega-festivals, some musicians are turning their sights to regional and rural towns, bringing new music to places often forgotten by the entertainment industry.



PHOTO: The crowd enjoying the Silverton Sunsets Music Festival. (ABC Broken Hill: Declan Gooch)

4. Community relations update

Community engagement



Community information

AGL contact details for community and project information are shown below:

- P: 1800-039-600
- E: community@agl.com.au
- W: agl.com.au/silverton

Construction information

GE-CATCON will provide contact details on the project signage for construction related queries.



- Weekly Generation Performance
- Silverton Wind Forecast
- Rehabilitation Works
- Daydream Mine Road
- WTG40 Gearbox Oil Spill



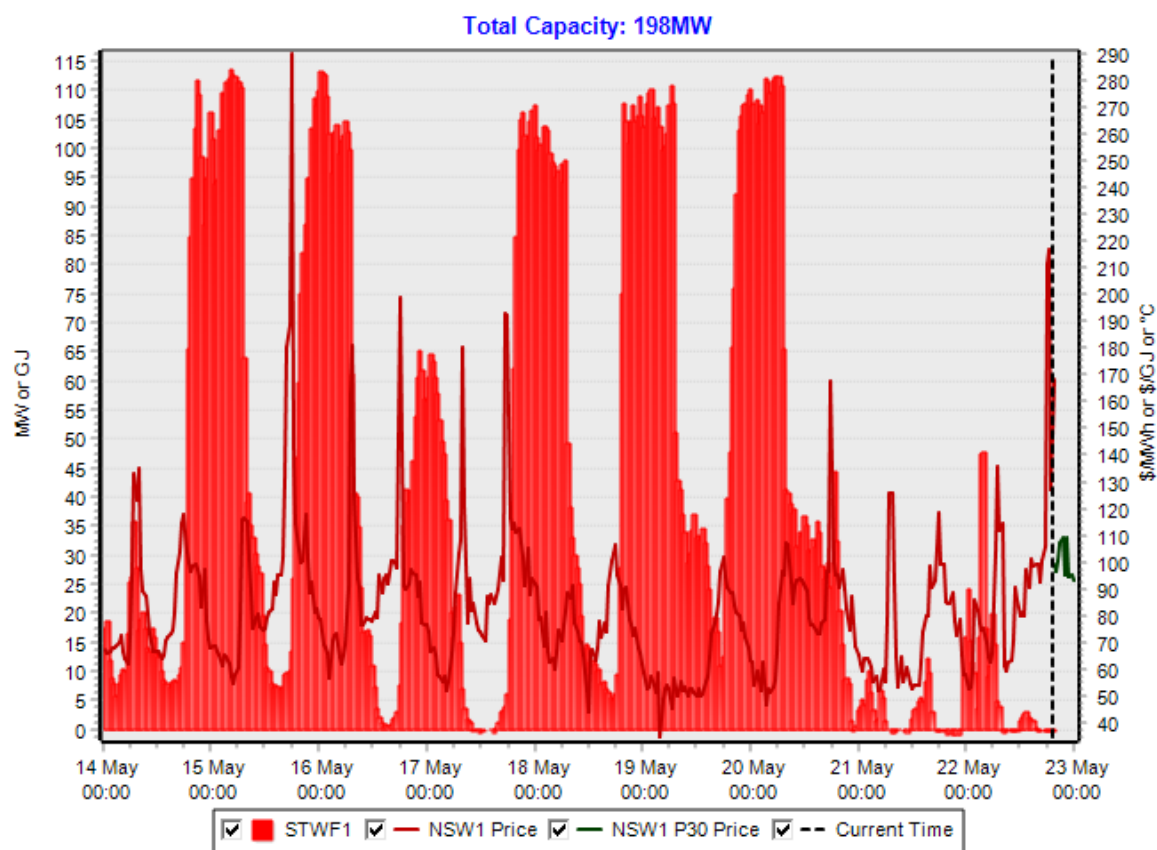
5. Topics of interest

5. Topics of interest

Weekly Generation Performance

Generation Performance

- Weekly graph for Tuesday, 14 May to 22 May 2019



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5. Topics of interest

Silverton Wind Forecast



Silverton Wind Forecast

- Monitoring night-time wind forecast for staging tests at 48 WTGs and +50 WTGs.



5. Topics of interest

Rehabilitation Works



Wind Farm Works

- GE-CATCON is progressing rehabilitation works across the site in accordance with the construction phase rehabilitation management plan specific to the Silverton Wind Farm site.
- Rain events from April and May 2019 have seen striking of existing seed bank in rehabilitated areas.
- Recent environmental audit of the wind farm noted the positive progress with striking in the existing seed bank



(Right) Rehabilitation of temporary site access track and
(Above) Rehabilitation of underground 33kV collector cable

5. Topics of interest

Daydream Mine Road



Maintenance Works

- GE-CATCON has undertaken maintenance works to Daydream Mine Road and is progressing handover to Roads and Maritime Services (RMS).



5. Topics of interest

WTG40 Gearbox Oil Spill



Minor incident

- GE 3.43-130 wind turbine gearbox has an oil capacity of 560l
- Nacelle contains built in bunding
- Approximately 400-500l of oil leaked from the gearbox at WTG40 on 28 April 2019
- About 1.5l of oil made it to the base of the wind turbine and was cleaned up.



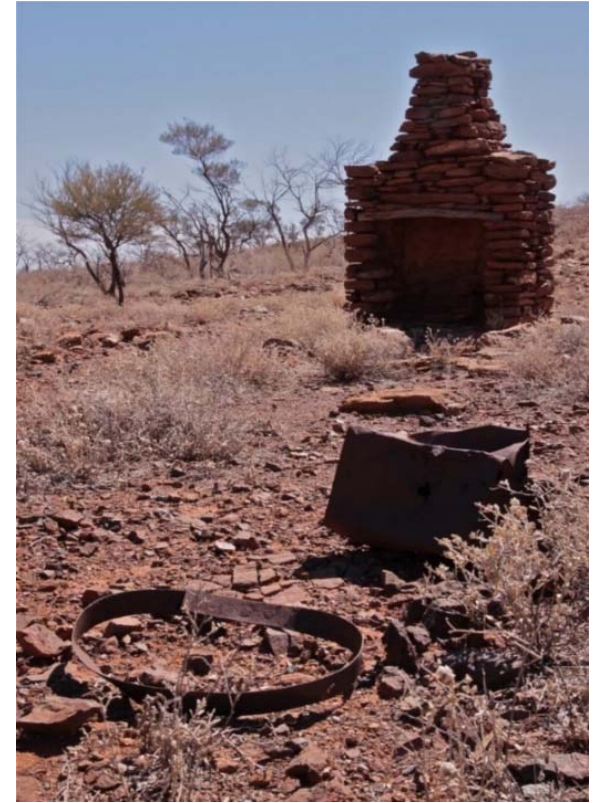


6. Other business

Silverton Wind Farm

Community Consultative Committee (CCC)

- Next meeting (TBC)
 - Thursday, 19 September 2019
 - Time: 6:00pm
 - Silverton Municipal Chambers, Silverton



Next meeting

An aerial photograph of a wind farm, showing several large wind turbines arranged in a grid-like pattern across a landscape. The entire image is overlaid with a blue gradient, which is darker in the bottom right corner.

Contact

AGL Energy
Silverton Wind Farm
1800-039-600

AGLcommunity@agl.com.au