Spicers Creek Windfarm (sic)

Aviation and Bushfire Submission

SSD-41134610

Grant Piper
'Peridot'
703 Tongy Lane
Coolah NSW 2843

22 August 2023

1.0 Introduction. I make this submission in opposition to the UMWELT/Squadron Energy wind turbine project. I do not use the Spicers Creek Wind Farm name as it is nearer to Gollan and the Dapper Nature Reserve, and is nothing like a 'farm'. This sort of deceptive mislabelling should be outlawed.

2.0 Light Aviation. The proponent acknowledges that aircraft in VFR flight, due stress of weather, may come below 500ft. The proposed turbine are over 800ft tall, so clearly they will pose a risk to aviation, especially in poor weather.

2.1 Having the turbines painted white is exactly the wrong thing to do, as they will not contrast with mist, cloud or rain showers. Statements by the proponent that pilots will be able to see and avoid large wind turbines in fine weather misses the point - the greatest risk is when the weather is poor and the pilot workload is high. Risk mitigation strategies need to be designed around this worst-case scenario.

2.2 Normal aviation standards should apply such as painting the structures with contrasting red and white striping as well as having obstacle lights or strobes. I cannot see how this standard is debateable.

3.0 Collision. The proponent cites past aircraft accident history in order to claim that the occurrence of aircraft colliding with wind turbines is low. While the probability of collision *may* have been low, the results are catastrophic to the pilot, passengers and their friends and families left behind. Given the extreme lengths we go to as a society to protect people from danger in other spheres of activity, such as road use, workplace safety and pandemics, a similar focus on preventing death or injury should be a given for large wind turbines. Even if we save one life and the associated distress, it would be worth it.

3.1 The massive expansion in number of large wind turbines, and their concentration within the respective REZs, usually built on high ground, means that the probability of collision MUST be increased over historical values. With the EnergyCo proposal to increase the CWOREZ from 3GW to 8 GW even more turbines will be built (if approved), and the risk will increase again.

4.0 Aerial Agriculture Operations. Fixed wing aerial agricultural operations will not be able to take place within the wind turbine area. This will be the result of any conservative risk assessment done by a pilot or employer. The proponent has not addressed the impact that the project will have on airag operations, rather they have ignored it and passed all responsibility to the aerial agriculture operaters.

4.1 Aerial agriculture in close proximity or between turbines is going to be curtailed. No honest risk-assessment would send an employee pilot into that hazardous environment. Helicopter work is significantly more expensive than fixed wing and is a poor substitute, and still would be significantly restricted by where it could be safely operated.

5.0 Aerial Firefighting. Similar to above, the proponent has not genuinely addressed or offered any mitigation strategies for the impact on Aerial firefighting operations, but has simply passed the risk-assessment and responsibility to the aerial operators. The proponent references the Australasian Services Council document 'Wind Farms and Bushfire Operations', but does not detail any pertinent content, such as:

'Turbine towers, meteorological monitoring towers and power transmission infrastructure pose risks for aerial firefighting operations. Meteorological monitoring towers and power transmission infrastructure are generally difficult for aerial personnel to see, if they are not marked appropriately.'

5.1 It is negligent of the proponent to ignore the very real detrimental impact of these structures on aerial firefighting.

5.2 **NSW RFS are remiss and professionally bankrupt in not making any submission on the project.** I suspect they do not make a submission because it would have to be in the negative, and they do not want to go against the dominant political messaging.

5.3 During the 2017 Sir Ivan bushfire aerial firefighting was used effectively. Large fixed-wing KC10, C130 as well as helicopters. To lose the option of large fixed-wing in turbine areas will reduce firefighting effectiveness significantly. Helicopters are excellent at point-protection but not capable of suppressing a broad fire front.

5.4 **No Large Air Tanker (LAT) can operate within or near a wind turbines especially if visibility is reduced, which is likely due to smoke.**

5.4 Even Small Air Tanker (SAT) operations will be severely limited and put in greater danger than normal for our type of terrain.

5.5 Helicopters with buckets will also be severely restricted, though some operations within the turbine area may be possible in favourable circumstances.

5.6 Visual Flight Rules require 5km visibility and must remain clear of cloud/smoke, and in sight of ground or water - Ref: AIP ENR1.2 However required visibility may be reduced to 1500m for fixed wing, or 800m for helo, if below 140 knots airspeed. **LAT would not be safe manoeuvring at low level at heavy weights below 140kias.**

5.7 Not being able to employ LAT or SAT will severely impede ability to quickly control large fires before they spread and grow.

5.8 In a Rural area virtually ALL the RFS Volunteers are farmers, thus non-host neighbours to the turbines will be forced to respond, and put in greater danger, because LAT are unable to be used on host land. **This is a further insult and potentially deadly impost on non-host neighbours who fundamentally oppose the project.**

5.9 I refer you to the ATSB Preliminary Report to the Coulsen C130 LAT crash in 2020.

https://www.atsb.gov.au/publications/investigation_reports/2020/aair/ao-2020-007/

5.10 The important part that LAT play in firefighting is acknowledged by the RFS Commissioner, but we would be denied their use due to turbines:

"RFS Commissioner Rob Rogers said while the report recognises the dangerous environment that pilots operate in while undertaking firefighting operations, safety remains the highest priority.

‘‘Aerial firefighting, including the use of Large Air Tankers, makes a significant contribution to protecting communities during bush fires, however it is an inherently dangerous environment and workplace.

‘‘Aerial firefighting is also very different to other forms of flying, due to smoke, weather conditions, other aircraft working in the area and operating at a low level." - Australian Aviation Magazine, August 2022.

5.11 RFS is poor at managing air assets and ignores obvious safety signals. This is a clear example of the consequences of ignoring reality and hoping for the best. This is not an acceptable method of Governance for any Department or responsible entity. **It is too late after a disaster to state 'we didn't know/acting on the best advice at the time', when plenty of knowledgeable people were trying to inform them of the foreseeable and likely problems well in advance.**

5.12 Aircraft may drop from above the turbine height, however their accuracy and therefore effectiveness will be reduced. Also, with hilly terrain, gusts, turbulence and poor visibility, some buffer above 250m needs to be added for collision avoidance. I would estimate that at least 1000ft/300m above ground would be used, so the drop accuracy is further diminished and the dispersion of retardant from 1000ft drop height needs to be considered.

5.13 Regarding the use of Small Air Tankers (aerial ag type aircraft like the AT802) - NO employer could expose their pilots to this level of workplace risk by advising them to fly amongst turbines, even when they are stopped. Helicopters may have more utility, but certainly the collision risk is increased significantly. Given the reduced visibility due to smoke, and gusty or turbulent conditions around large fires, this would be a very unsafe workplace. Stating that Aerial Agriculture and firebombing operators will conduct a risk assessment and use appropriate procedures ignores the fact that they will AVOID turbine areas, or be ineffective dropping retardant accurately in those areas.

5.14 Due to this inevitable reduction in aerial firefighting effectiveness, the risk to ground based fire fighters is increased. When a fire is within a turbine area, the landholder and neighbours would be the first on the scene to fight the fire. *Neighbouring non-host landholders would be compelled to fight a fire on turbine host land with reduced aerial support, and thus put in greater danger than otherwise.*

5.15 *This is not equitable and cannot be discounted as inconsequential or an acceptable risk. Particularly so if those non-host farmers opposed the projects and identified the potential problem years prior to construction*.

6.0 Conclusion. Within the aviation section of the EIS the critical high-risk items that should immediately stop the project have simply been ignored so as not to draw attention to them. This denial of reality is extremely worrying to those of us affected and live daily with, and plan for, the vagaries of the physical world.

Author's CV:

Bachelor of Engineering (Aeronautical) UNSW.

MRAeS

Ex-RAAF Pilot, DFSM, AASM

1600hrs experience on the C130 Hercules transport (type used as LAT in 2017-2020 fire seasons).

1400 hrs experience as Forward Air Controller - operating at low level directing attack aircraft and artillery - similar to fire spotting.

Civil Low Level Endorsement to operate below 500ft.

Authorised to fly aerobatics to ground level.

Authorised to train and issue Aerobatic Endorsements to ground level.

NSW RFS Volunteer 20+ years with recent experience at Sir Ivan fire 2017 and Flaggs Road fire 2019 where use of RFS aerial assets was closely observed.