



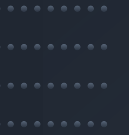
SNUG NZ Northland Region Update 25 September 2024

Brendon Tong, *Matatau* ITS Signals Engineer, Whangarei District Council

Breaking News

- NTA disestablishment
- Regional Challenges
- Transpower outage June 2024





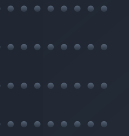
Northland Transportation Alliance Disestablishment



NTA Disestablishment

- It's the end of the road for the Northland Transportation Alliance as from July 2024.
- The Council members voted to disband the alliance in favour of a new mixed model which comprises some shared services on a peer engagement basis, with the majority of transportation retained in-house.
- This allows for greater local focus on individual council projects, but retaining opportunities for collaboration where practicable.
- The NTA formed back in 2016, and during this time the Regional Operations Team met all manner of challenges, including COVID19 pandemic, numerous damaging storm events and the ever-present one of working around multiple systems and processes.
- People who might be looking for me can contact me at this new email Brendon.Tong@wdc.govt.nz Matatau ITS Traffic Signals Engineer





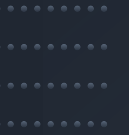
Regional Challenges



Regional Challenges

- The transition from an NTA alliance environment back to a WDC led environment, and the huge staff turnover we are experiencing as a result.
- Part of the transition is of course the knowledge management and retaining crucial knowledge in the midst of it!
- Focus points for us in the short to medium term include making progress on fibre conversions from 4G, improving resilience and monitoring capability – and doing so in the midst of constrained budgets!
- Congestion and delay is always a consideration in a growing city and district. Whangarei town wasn't planned in the same way as other towns, and this presents problems in how we allocate road space to the various users.
- As part of that, much walking and cycling infrastructure has been taken off-road.





Transpower Outage 20-22 June 2024



Transpower outage

- Around 11am on 20/6/24 a transmission tower near SH16 Glorit fell unexpectedly.
- This caused a power outage to Northland, taking down the entire region.
- Transpower declared a Grid Emergency Notice as the 220kV network was down & limited 110kV supply was available.



WDC & NTA Response 2

- Emergency operations focus for traffic signals shifted during Thursday to relieving traffic management staff and obtaining generators from out of the area.
- At that point in time there was a real risk of rolling blackouts and so it was critical to start thinking about more equipment and fuel.



Transpower is assessing how long it will take to return that circuit to service.



Aftermath

- By the weekend Transpower had successfully erected a temporary tower and 1x 220kV circuit was operational.
- This, combined with the 110kV capacity and the reconfiguration of Ngawha geothermal station and energy conservation, avoided blackouts and systems returned to relatively normal operations.



Lessons – so what did we learn?

- This brought all the gaps in our equipment state, planning and operation into sharp focus.
- We realised quickly that we needed more portable generators than we could obtain quickly.
- The majority of our comms are 4G for traffic signals in Whangarei – at present. Loss of power at cell sites did create problems for us.
- Many other utilities suffered from similar issues.



Next steps

- In the last 3 years we have had 2 major power outages affected Northland and one less serious one.
- What this means for us is that our security of supply in Northland is much weaker than other areas.
- Migration from 4G to fibre comms is underway – selected sites will have 4G failover.
- Some sites will be considered for UPS backup.



BNZ Whangārei staff help people get across the road at the busy Bank St, Rust Ave, Cameron St intersection, including Brad Williams from Kensington. BNZ's Gina Chapman said the bank's vaults have automatically locked and staff came out to talk to customers when they noticed pedestrians struggling to cross the road. Photo / Michael Cunningham



Points to ponder

- We currently have a matrix in P43 for considering UPS, however it doesn't consider the supply situation we find in Northland.
- What do other centres do and how do others decide how many generators to provide – or do you?
- What should best practice for handling loss of commercial power look like?
- I am considering UPS backup for a number of sites on my network, together with fibre and 4G failover. A number of upgrades will be required.





Well done Team!

Thanks to CSLi/Currie Electrical for your help responding to the outage 😊