

[REDACTED]
Sent: Saturday, 18 July 2020 4:57 PM

To: Dane Gunnell <Dane.Gunnell@comcom.govt.nz>

[REDACTED]
Subject: Aurora Clyde Network and line charges.

Hi Dane and [REDACTED]

[REDACTED]

The general concerns that I am fielding is that using technical issues And multiple numbers the wool is being pulled over peoples eyes by Aurora.

While fielding concerns I will speak on my own behalf about concerns over the CPP consultation process by the Commerce Commission.

I would have concerns and would not attend a process that Aurora is managing or has an input to. Aurora contracts in very experienced lawyers and spin advisors that would be no match for the general public. Managers could revert to technical jargon that will confuse the public. This could be a process to tick a box.

I would support the Commerce Commission chairing the meeting with outcomes reported back to Aurora. Members of Aurora who own holiday homes in Lakes Central have right to attend but only as members of the public.

Thank you.

[REDACTED]

Hi Tim.

Apologies for the length of this.

Going through numbers comparing CPP and AMP. Hard to know exactly what their solution is from this data. Trying to get some info out of my connections.

When it comes to CPP and AMP, [REDACTED] is your best resource.

There seems to be an anomaly between both documents. Refer table 33 below.

The table 33 you sent me comes from Page 147 of the CPP.

Lines 2, 4 and 6 spending RY21, 22 and 23 adding up to \$3.8M could be staged parts of a project to extend 11kV to Clyde, and convert Clyde to 11kV. There is no mention of Earnsclough until RY25 and 26.

For Clyde to convert from 6.6kV to 11kV would require a new 11kV transformer at Clyde Earnsclough substation. I don't see any expenditure for this. \$0.6M I would doubt would cover this and it would be a one off cost.

In the AMP statement XIX page 418 there is mention of \$5.7M to be spent by 2025.

I assume this is the amount to be spent on that substation and down stream infrastructure.

To. Supply Clyde, 4MVA, from Alexandra, Alexandra Zone sub would have to have 4MVA of spare capacity. Passing 4MVA from Alexandra to Clyde at 11kV will require a large capacity line. ie large cross section area of conductor on lines or cables, meaning stronger poles. This line should be as short as possible. Preferably it would be an express feeder meaning no other consumers coming off it on route.

Looking at the dollars and broad project descriptors I am struggling to appreciate how they are going to achieve this.

My suggestion would be that you ask Aurora what approach they are taking and a detailed staged timeline explaining how they are going to ensure Clyde of a secure supply with backup N-1. Aurora has only one mobile substation and this could be in service in Dunedin should a fault occur in Central Otago Lakes.

Regards

██████

Read this if interested or roll your eyes back. I fully understand if you adopt the latter :).

Voltage (V) is an electrical force that causes the movement of current (A).

Voltage symbol is V and unit of measure is volts, (V)

Current symbol is I and unit of measure is amps, (A)

Current does work on its way through A circuit and will always go back to where it came from by a return circuit. eg battery, generator, transformer. or three phase by Physical/mathematical cancellation between three circuits.

Work done is heating a wire, glowing a wire to give off light, arc to give off light, Creating magnetic fields to rotate motors.

Current is the flow of electrons freed from the Atom of say copper or Aluminium.

MVA is Volts x Amps with multiple of 1,000,000.

VA to the layman can be thought of as Watts, (W).

A transformer changes voltage and current. $V \times A$ into a transformer equals $V \times A$ out of a transformer. ie $VA = VA$.

High voltage times low current equals low voltage times high current.

High voltage used to pass low current over distance. eg 11kV, 33kV, 66kV, 110kV, 220kV.

Low voltage gives high current that does work in all homes factories etc. eg 230V single phase, 400V three phase.

Energy is work done over time. Energy equals voltage x current x time used.

Time used usually hours. Hence you buy energy at kWh, kVAh or MVAh.

Where k and M are multipliers to keep 0's off the power bills.

There ends my lesson.

Sorry about that.

Growth and Security Capex



Table 33 : Distribution reinforcement scheduled projects

Project	RY21	RY22	RY23	RY24	RY25	RY26
Extend Ripponvale Road spur to SH6	\$0.3m					
Letts Gully and Springvale Road Reinforcements		\$1.2m	\$1.2m			
Earnscliffe Road Reinforcement					\$0.3m	\$0.3m
Mutton Town Rd Express Feeder	\$0.5m	\$0.5m				
Frankton Arm 11kV Cable					\$0.2m	\$0.6m
New Clyde Township Supply	\$0.4m					
New Cardrona 11kV Feeder Cable	\$0.3m	\$0.8m	\$0.5m			
New Commonage 11kV Feeder					\$0.7m	\$0.6m
Opportunistic work with developers to prepare for future expansion	\$0.4m					

In the Aurora CPP what is the definition of “average line charge increase”

Average is misleading. Dunedin will be low increase for political reasons as users vote for the owner.

Frankston will be low because of competition due to

Powernet’s presence.

That leaves Central Otago with no leverage. Aurora has an outright monopoly.