

### **Submission Request**

All ICP's should have a registered capacity (pole fuse capacity) that is stored in a publicly searchable way and should be annotated as part of all electricity supply contracts.

### **Reason for the request.**

A large number of commercial contracts with Electricity retailers are in many cases volumetric, network connection capacity generally has nothing to do with the retail contract other than to direct which load group tariff is applicable. It is my understanding that the retailer has no access to capacity information.

A School (outlined in the below example) was on PowerCo tariff load group V24 which has a capacity range of 61A to 250A the actual capacity that the school is entitled to is held by the Distribution Company, which only offered historic capacity information back to 2011.

The current distribution company is a third iteration owner of this network, with all the attendant corporate memory loss that occurs as systems are taken over, amalgamated and upgraded, it would be very interesting to know what the original capacity contracted was and if this has changed, what was the process and was it agreed by School/Department of Education/Ministry of Education.

The reason that we think this is important is that capacity, if not agreed and documented, will be an area of contention as distribution electrical infrastructure requires upgrading to meet the increase in demand that electrification of transport is sure to require.

### **Example school with capacity contention issue.**

#### **Query made to both EA and to Commerce Commission**

#### **A School that had reduced capacity constrained by Powerco**

##### Background

A School in the Waikato that was established and opened in 1955 and up until around 2003, the heating of internal spaces at this School was achieved through a mixture electric heating and a centralised boiler system (4 classrooms of the 17 on site in 2003 were serviced by the centralised boiler system). Around 2003 this boiler was decommissioned because of aged and deteriorated components, piping issues, leaks and asbestos. At this time all classrooms heated by the central boiler system were upgraded to heat pump electric heating. Two other classrooms added in 2005 and 2010 had heat pumps installed as part of the build – these two classrooms brought the total number of classrooms on site to 19.

In 2011 a request was made to Powerco to decommission an ICP on the school site that had fed the school dental clinic that was previously owned by others but had been transferred to school ownership. At this time, it appears that Poweco decommissioned one ICP and determined that the other was a VO6 60 amp 3 phase connection. At this time there were 19 classrooms on site with attendant administration, all of which was heated and lit electrically. A very rough calculation that does not include any administration usage, hot water heating or other miscellaneous usage would be:-

- 4kW's of heating in each classroom (that is the equal of 2 x 2kW radiant heaters or 2kW forced air convection heaters in each classroom – this would be deemed a minimum). This equals 76kW's or a total 330 amps or if balanced across the site 110 amps/phase
- Lighting in each classroom made up of 6 twin 1.5m fluorescent luminaires. This equals 13.5 kW's or a total of 60 amps or if balanced across the site 20 amps per phase

So just heating and lighting of the 19 classrooms comes in at over 130 amps, which is over twice that of PowerCo's seemingly arbitrary 60 amps per phase.

A major building refurbishment of Block A (six classrooms and the admin area) led to a query about capacity, a Powerco contractor completed some type of review that ascertained that the pole fuse capacity was 80amps. An upgrade to 100 amps was requested and granted, work to be completed in July 2016. When this pole fuse upgrade work was undertaken it was found

that the pole fuses were 200 amps. Powerco logged a safety incident due to the whole current meter being rated for less than 100 amps and downgraded the pole fuses to 100 amps.

The school, for the last 3 winter heating seasons has lost pole fuses which has meant that the school have had to close until electricity has been restored – this is not an acceptable way to run a school.

Powerco's mantra is that the School was only ever on a 60 amp 3 phase connection, this is an issue of the schools making and therefore they need to pay for an upgrade to the Powerco Network to meet their current capacity requirements.

It is our contention that there must have been a mistake when the spare ICP was decommissioned – the only thing that we can think of is that the load group for the decommissioned ICP was transferred to that of the schools retained ICP

The school has always been a much greater than 100 amp connection

- Main switch rated at 250 amps
- Main incomers into the school are 70mm coppers (rated at over 300 amps when buried directly)
- The rough calculation above showing just heating and lighting load for just the 19 classrooms

In our dealings with Powerco we have found that they are not transparent in their actions or their process's: -

- There is no ability to confirm through a public register the schools capacity
- There is no ability to confirm through a public register to confirm historic changes in the school's capacity

Powerco are also not a particularly easy organisation to work with:-

- They will not provide an understanding of how capacity ratings are set for their transformers – it appears that other EDB's have different way to assess capacity, how are we to determine which is correct.
- There is no flexibility in their process – replacing a 200kVA transformer with a 300kVA with desire to implement a 200 amp capacity upgrade was requested this was denied outright, this meant that installation of a new 200kVA transformer on the school grounds was the next solution. However in going back to get further clarity, Powerco have now agreed that a 160 amp upgrade would work. If this had been offered at the start, we may not have got to this point
- They have devolved responsibility for explaining what is happening on their network to approved contractors who keep deferring back to Powerco.
- When queried about their tariff structure they pointed me to the retailer and directed me to their pricing guidelines. When I questioned the retailer, they pointed me back to PowerCo.
- They do not seem to challenge inaccuracies that appear in their approved contractors documentation that will benefit them, examples are:-
  - The need for an easement funded by the customer – this was shown not to be a requirement in their Electricity Connection Standard
  - The need for change in tariff group V24 to V28 – their documentation is a little ambiguous, but this change is material as it adds around \$10,000 to the schools' annual electricity costs.
- All solutions that Powerco offer enhance the Powerco network at great cost to the customer along with the ongoing network costs. I liken this to leasing a car, paying the full cost up front and then paying the monthly leasing fee

As the Ministry of Education funds 2450 schools in New Zealand, in the future we may expect to deal with a range similar process and data lead interactions with the wider electricity industry. How will the Commerce Commission and Electricity Authority support us navigating these waters in obtaining the necessary / required information from suppliers such as Powerco who are less than forthcoming with information that will allow our organisation to make as informed a decision as possible when committing to spending taxpayers' funds.

### **Electricity Authority reply**

Powerco operates on a fully interposed relationship with retailers – Powerco’s use of systems agreement states “Interposed” means in relation to a consumer, that the distributor provides distribution services to the retailer and the retailer contracts with the consumer for the supply of those services. I recommend you speak to your retailer as the company who you have a contract with.

If you aren’t able to come to a resolution, and you have been through the retailer’s formal complaints process, then Utilities Disputes are an option. They are a free and independent resolution service for the industry. You can reach them on 0800223340 or via <https://www.utilitiesdisputes.co.nz>. Decisions made by Utilities disputes are binding.

### **Commerce Commission reply**

Hi Kimbal, and many apologies for the delay in replying to you. The situation that you have found the School in is unfortunate, but regrettably is not one that is included in the Electricity Authority’s scope. As such, there is little that the Authority can do in this situation.

Although we have not spoken to Powerco, it appears to be a case of incorrectly recorded network capacity and it has stirred my curiosity.

To address your last points in order (*Com Com answers italicised*):

- a) The school’s contract with its retailer is volumetric – the issue that I have outlined below is one of network connection capacity which has nothing to do with the retailer who apparently has no access to that information.  
*That is correct. The retailer will not have access to the distributor’s connection capacity records. However, the retailer may be able to help you with discussion, access to, and interpretation of information from the distributor.*
- b) While on load group V24 which has a capacity range of 61A to 250A the actual capacity that the school is entitled to is held by the Distribution Company, which only offered historic capacity information back to 2011.  
*It is common practice for distributors to define tariff groups over a range of connection capacity. The actual charge applied to any one customer being the actual installed connection capacity – often referred to as the contracted capacity. I cannot comment on the records kept by the distributor but would have expected that those records would have been available.*
- c) The current distribution company is a third iteration owner of this network, with all the attendant corporate memory loss that occurs as systems are taken over, amalgamated and upgraded, I would be very interested to know what the original capacity contracted was and if this has changed, what was the process and was it agreed by School/Department of Education/Ministry of Education.  
*Unfortunately we are not able to access this information as the Authority does not hold, or have access to, any contracts of this type. Only the parties you mention will have access to this information.*

I think that your options are:

- a) *Discuss the issue with Utilities Disputes Limited (UDL) as previously suggested to you. UDL provides a free and independent dispute resolution service for electricity complaints – and offer a wide range of dispute resolution techniques to assist in finding a solution. Please note that Powerco is listed as a member provider on UDL’s website at [www.utilitiesdisputes.co.nz](http://www.utilitiesdisputes.co.nz). I strongly suggest you consider contacting UDL to find out more about their complaints process, as they may be able to assist. The complaints process is explained at [https://www.utilitiesdisputes.co.nz/UD/Disputes/Energy\\_-\\_electricity\\_and\\_gas/Complaints\\_process/UD/Disputes/Complaints\\_process.aspx?hk](https://www.utilitiesdisputes.co.nz/UD/Disputes/Energy_-_electricity_and_gas/Complaints_process/UD/Disputes/Complaints_process.aspx?hk)*

ey=28de9bfe-d359-40f7-9b23-5b92d210ae89. Alternately, you may wish to contact UDL to discuss the issue at 0800 22 33 40 or [info@utilitiesdisputes.co.nz](mailto:info@utilitiesdisputes.co.nz)

- b) Discuss the issue with more senior staff within Powerco. The participants register at <https://www.ea.govt.nz/dmsdocument/24405-participants-register> lists two contacts at Powerco that you could try, out of these two I suggest Stuart Marshall, General Manager Regulation and Commercial, cell 021 688 367, email [stuart.marshall@powerco.co.nz](mailto:stuart.marshall@powerco.co.nz)

As you can see from the responses provided by the Electrical Authority and Commerce Commission, supply capacity is not covered by either of their remits. However it is my concern that if electricity service capacity (pole fuse capacity) is not documented as part of the Electricity Supply Agreement, there is the chance for conflict between consumers and distribution companies who at this present time have no contractual connection.