



“Affordable Electricity for all”

New and Emerging Technology



fieldsmart technology

Introduction





Introduction

- **Karl Henry** – North Island Sales & Support Engineer for the Power Division of Arthur D. Riley.
- ADR have Five divisions comprising of Power, Water, Metering, Handheld and recently Control.
- You will be more familiar with Arthur D. Riley's Cash Power product. **CASHPOWER**
- Offices located in New Zealand – Auckland, Hamilton, Wellington and Christchurch.
- ADR is a privately owned company, established in 1909, representing 108 years of trading and employs over 90 personnel.

Affordable Automated 11kV Ring Main

ADR recognised an opening in the **NZ** market

- Modular design provides Customers specific needs.
- A unit that can withstand the elements.
- Optional Automation.
- Low Maintenance.
- Low life cycle cost
- Environmentally Friendly.
- Improved Operator and Public Safety.





ADRpower



ENTECH
ELECTRIC & ELECTRONIC CO., LTD.

ADR
Arthur D. Riley & Co. Ltd.

fieldsmart technology



HALO
SOLID RING MAIN UNIT



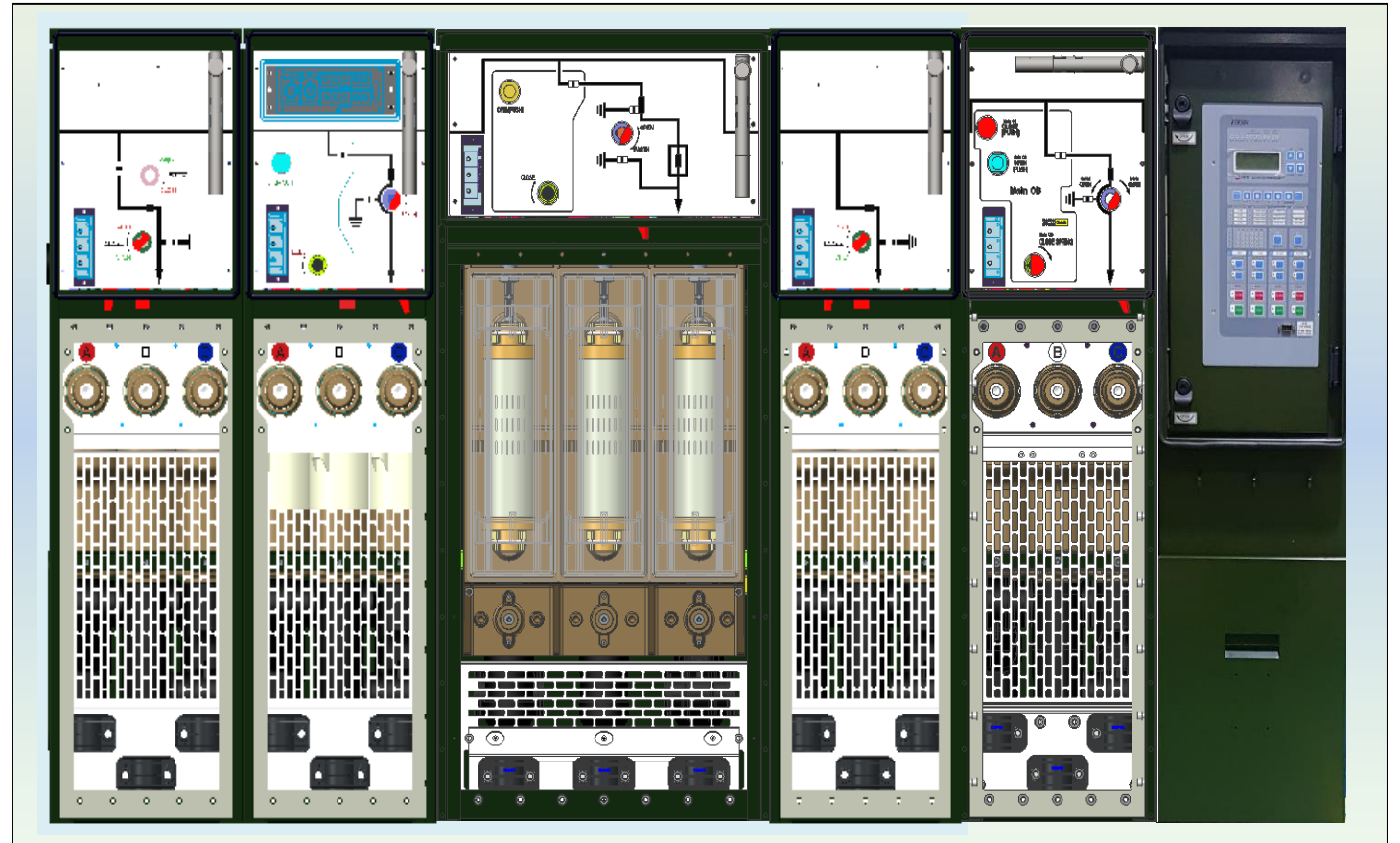
Outdoor Ready, **Affordable**, Public Friendly RMU



- Modular
- Stainless Steel
- Solid Insulation
- Vacuum Interruption
- Extensible
- Automation
- Public Safety
- Intuitive operation
- Low Maintenance
- Affordable long term RMU option.

Halo SRMU Modules

- The Halo is completely modular.
- Six modules types available.
- All Halo SRMU's can be extended once in service and this doesn't need to be specified at the time of order.
- Customer's can carry out this work out on site.
- Modules are constructed from Stainless Steel.
- Halo modules are IP55 and do not require any additional enclosures.



C

Switch

V

Circuit Breaker

F

Fuse Unit

D

Direct Connect

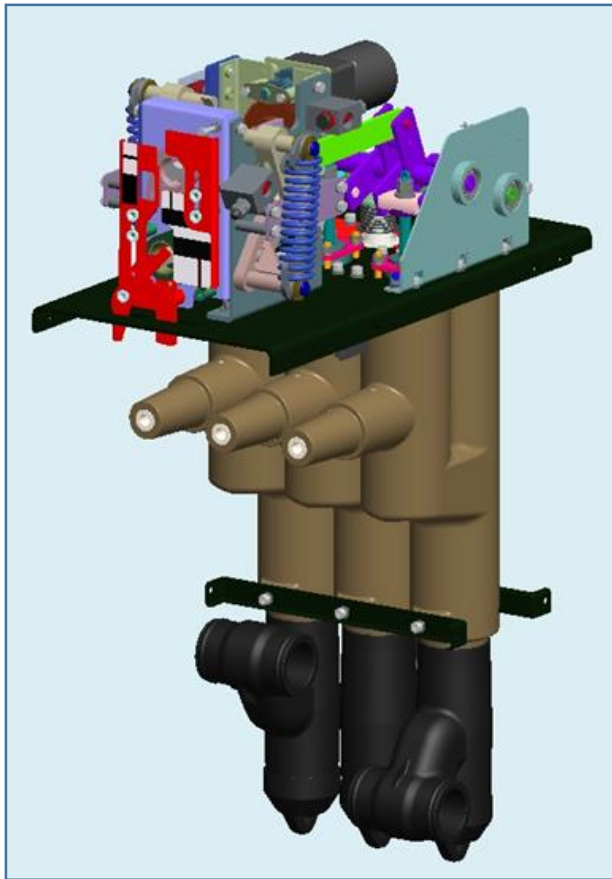
P

Pre-Charged Unit

S

Scada Cabinet

Switchgear Design

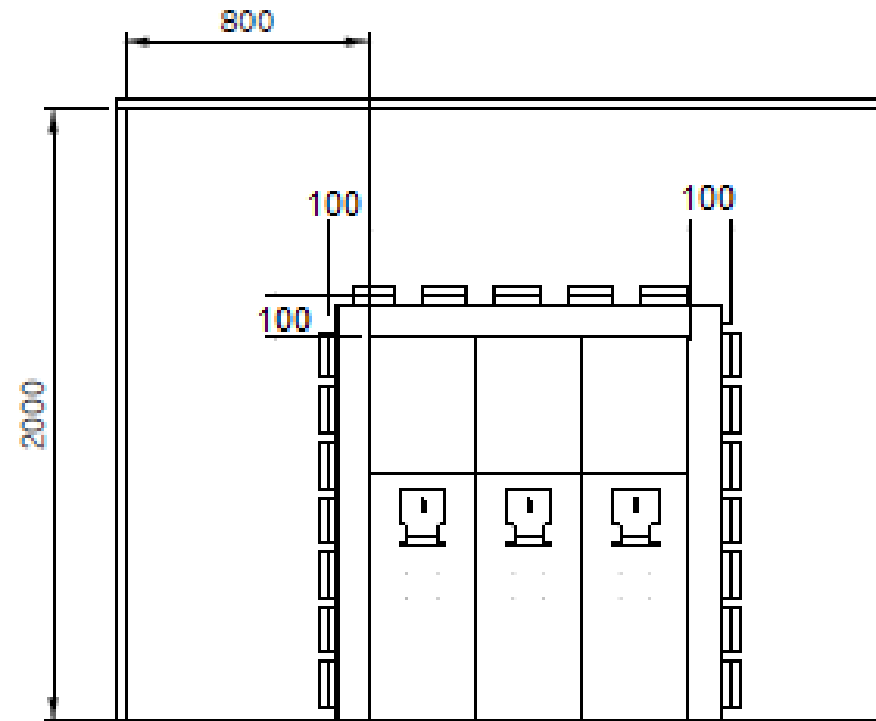


Vacuum Switch

- 630A vacuum circuit breaker
- Spring Charge mechanism
- Motorized operation (SCADA option)
- Separate isolator/earthing switch
- Protection as specified by our customers
- Tripping facilitated for a wide range of relays
- Size: 350(W) X 730(D) X 1250(H)

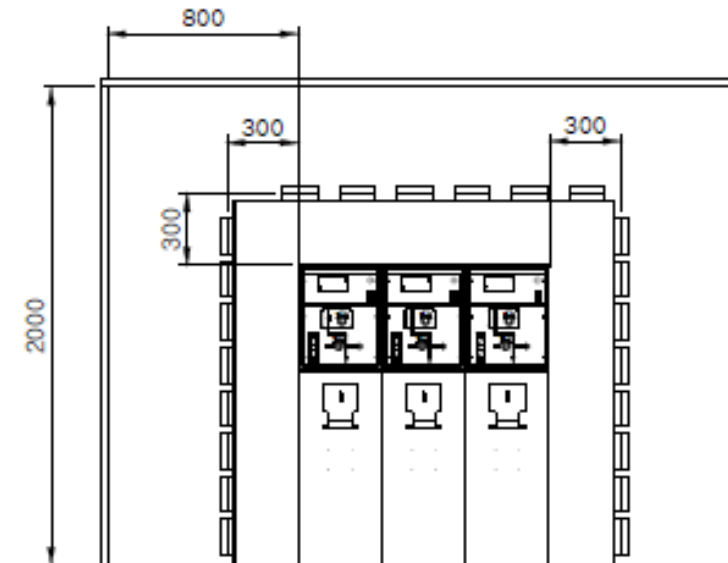
kV	12
A	630
kA	20- 3s

IEC 62271 – 200 Arc-Fault Classification



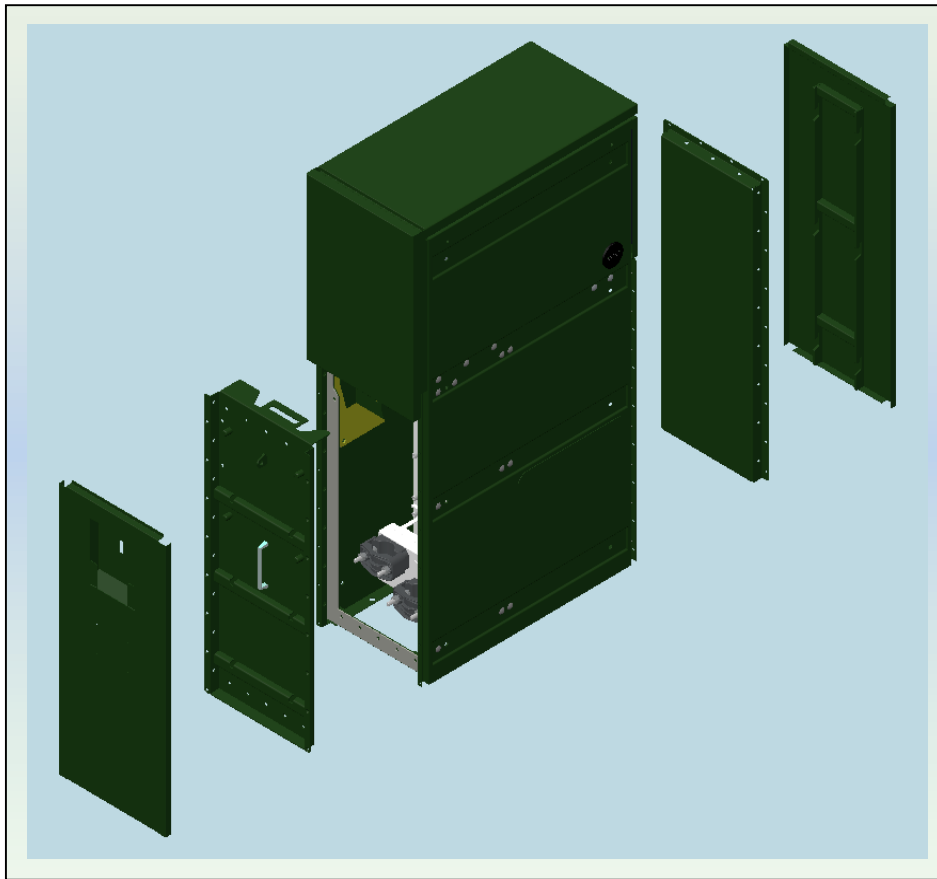
Class B

A = Restricted access (authorised Personnel) 150g/m² cotton placed 300mm
B = Public access (general public) 40g/m² cotton placed 100mm
F = Front
L = Lateral
R = Rear



Class A

Enclosure Design

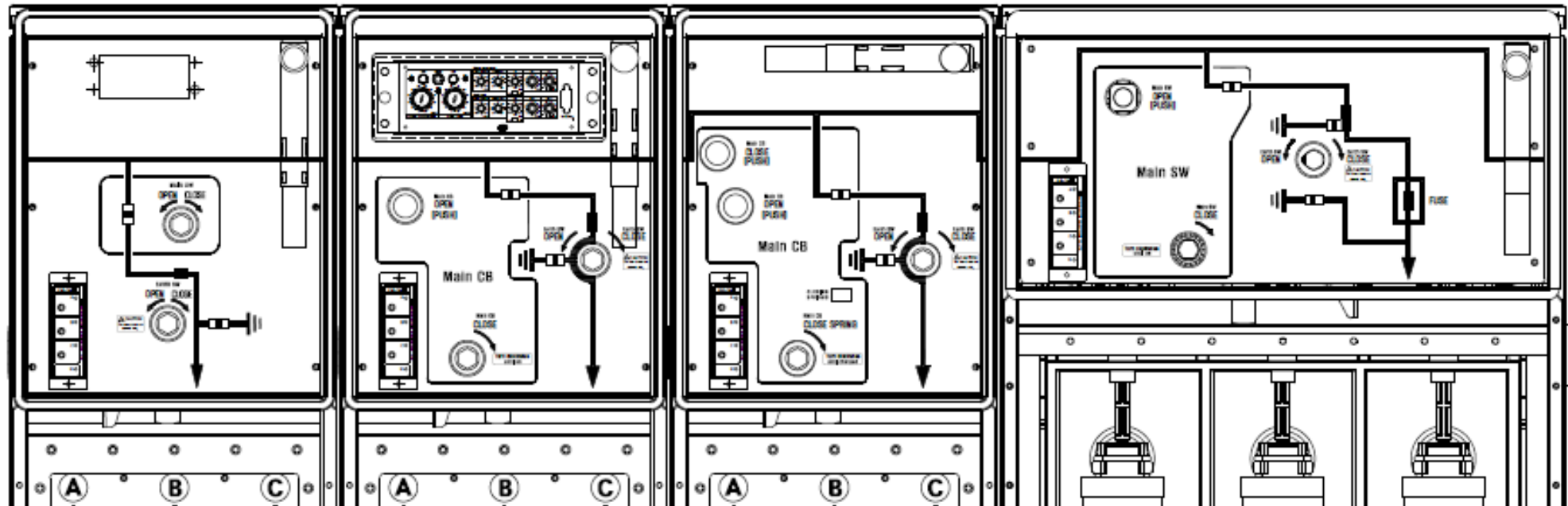


- Double skin front and rear panels for medium voltage terminal box
- Double skin side panels
- Single point of access via front panel padlock
- Outer front panel interlocked to prevent removal unless earth switch is closed. No consumable parts
- Interlock to prevent Earth Switch operation when outer front cover is removed.
- Main cabinet cable terminal box to be opened at the lower front edge to allow unrestricted cable entry

Intuitive Operation



Clear and simple design



Basic Entry To Market Options



- Fuse Module
- CB Self Powered OC/EF relay.
- Low life cycle cost

Automation Options



- Optional SCADA Module
- Factory or Customer build options
- Third party Protection Relays
- Local – Remote operation
- Feeder Automation

Automation Options



Entec - ETR304/6 Protection Relay



Features

- 4 way Multifunction Relay
- CB or LBS function as required.
- Protection functions
- Event Recorder
- Profile Recorder
- Passage of Fault indicator
- RTU Function.
- Various communication method support
 - : DNP3.0, Modbus,
 - : IEC60870-5-101/104(option)

FCI – Faulted Circuit Indicator

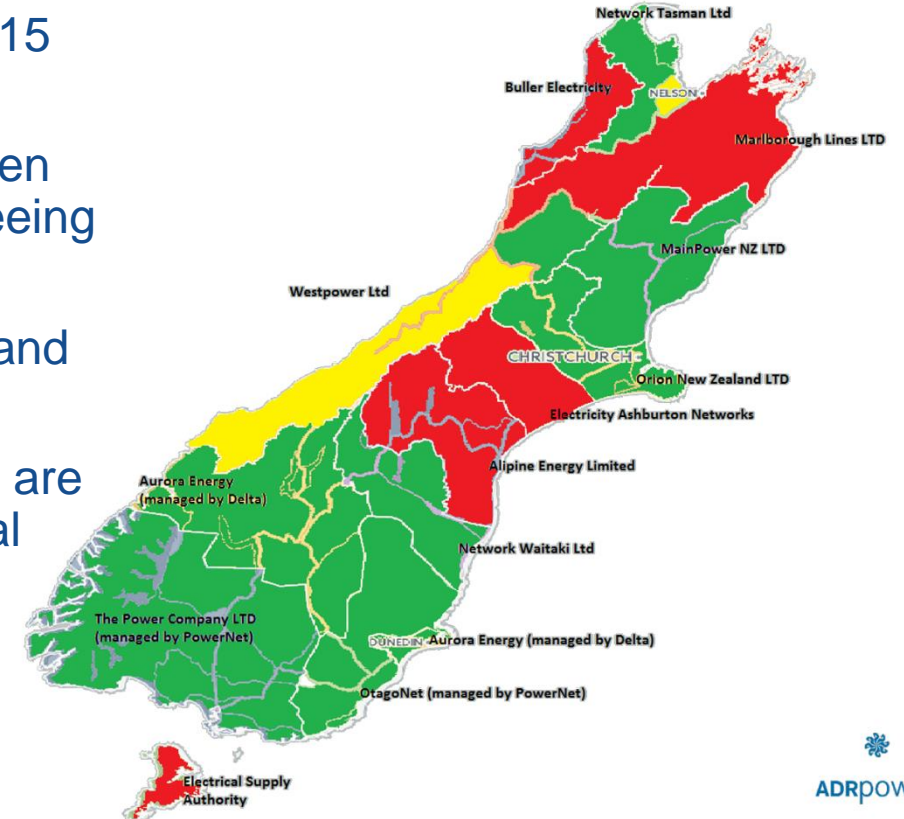
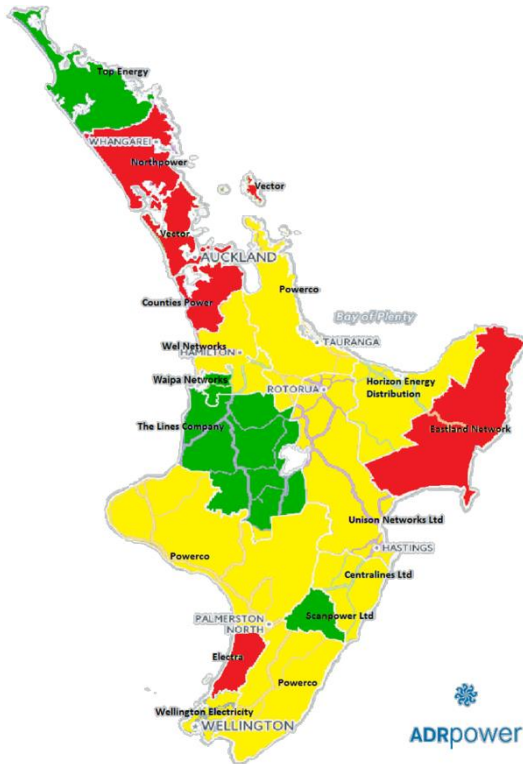


Features

- Standard issue
- Fault Detecting Function
Each phase (A, B, C, N) by LED flashing
- Lithium Battery as power
- Cold Load Pickup Current
- Automatic / Manual Reset Function

Halo SRMU Users Within NZ

- First Halo installed June 2013.
- 380 Halo's operating in NZ.
- There are 29 lines companies in NZ and 15 are currently using the Halo.
- The South Island of New Zealand has seen greatest sales and customers are now seeing a return on their Halo Investments.
- Six Lines Companies within the North Island are currently using the Halo.
- Five other North Island Lines Companies are putting the Halo through their own internal approval system.



Reference Photos



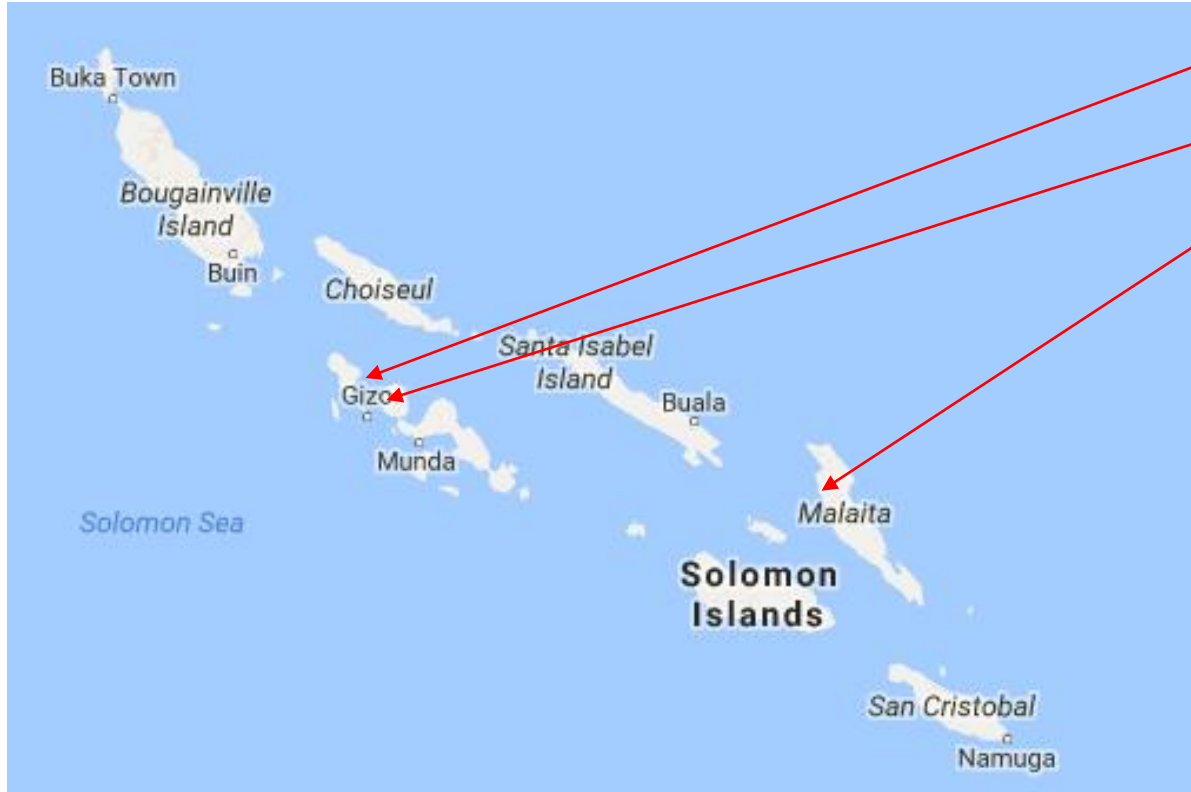
Ideal for small locations



Low cost outdoor substation



Solomon Island Low cost substation Switchboard



- Noro
- Gizo
- Auki



Happy Days



Whakapapa Ski Field



- Temperature range of -15 Degrees to + 40 Degrees
- High exposure to sulphur
- Needed to have reliable Automation control
- Low Maintenance
- Custom Paint Job
- Extra heaters



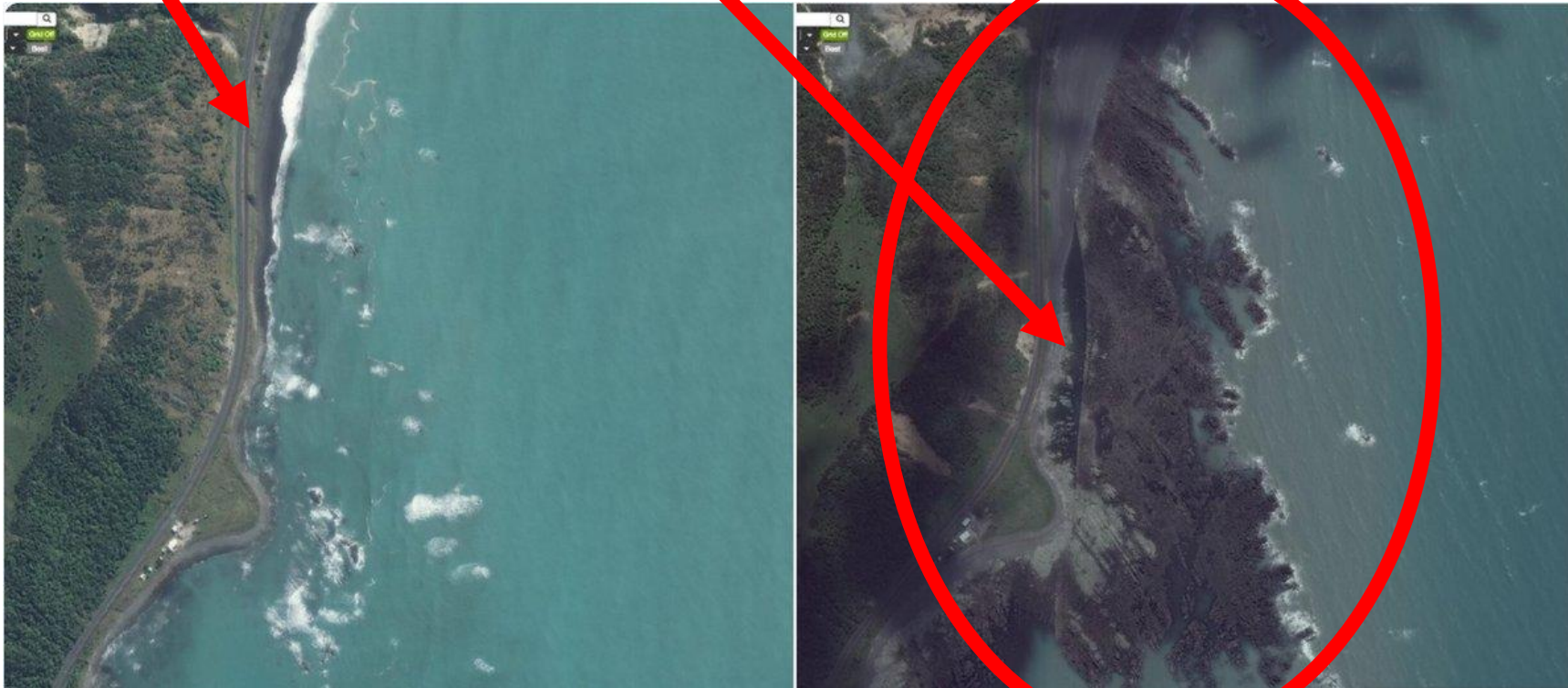
Custom Colour Options



2016 - 7.8 Kaikoura Earthquake



Before and After



Survived



Products By ADR Power



ADRpower



- Load Break Switches
- Auto Reclosers

ENTEC
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- Vacuum Insulated Switchboards

EATON
Powering Business Worldwide



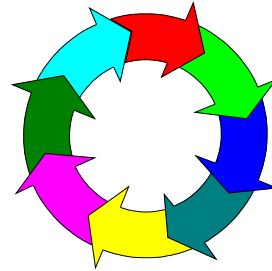
- Voltage Regulators

COOPER Power Systems

ADR
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Durable And Environmentally Friendly



Design compliance - 30 years

+

No SF6 Gas

Stainless enclosure

www.adriley.co.nz