

CAREFUL PLANNING  
**FROM LV TO HV  
CONNECTIONS**


YEAR IN REVIEW  
Our 2025  
achievements

PAGE 8

**Bowthorpe**<sup>®</sup>

Sieyuan

**EFEN** 

Langmatz 

**PFISTERER**

**POLARIS**

**Lucy**  Electric

**NKT**

**insulect**  
VERSATILITY VIA COLLABORATION

Providing quality connection solutions alongside these leading global brands.

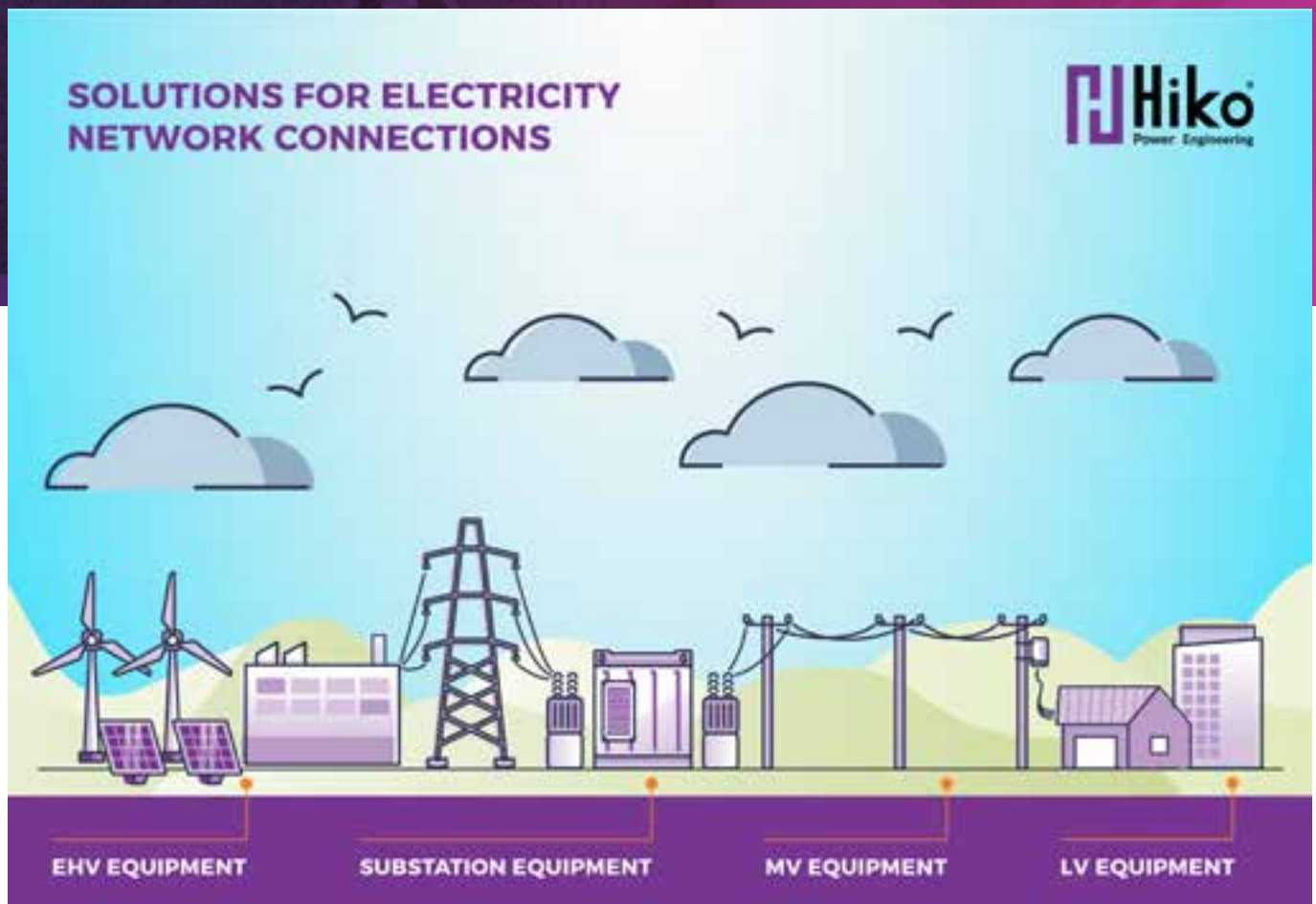
# LV to HV 85 years in the making.

Over the years, Hiko has steadily expanded our capability across the power network – from low voltage through to high voltage. It hasn't been a quick process, and that's deliberate.

We've taken the time to plan carefully, design thoroughly, and test rigorously. We've built relationships with international partners who share our high standards, and we've put every product through its paces before it reaches a network and is placed into New Zealand's unique environments.

That methodical approach means a lot – to us and to you. When we say we can support you from LV to HV, it comes with the confidence of work already done – quality proven, safety built in, and lead times that reflect our local manufacturing capability.

We're here for the long haul, and we've built our range the same way.



## Proven Performance Across Mixed Networks

Most overhead networks include aluminium, copper, and ACSR conductors spanning decades of installation—some sections can date back 50+ years, whilst others are still being commissioned.

Specifying connection hardware for NZ networks means choosing products that behave consistently across conductor types, installation conditions, and time.

Bowthorpe HD Series Line Taps have been connecting New Zealand lines since 1952. That longevity represents something valuable: decades of field-proven performance data. Manufactured from controlled brass extrusions and tested through extended heat-cycling, these taps deliver stable contact pressure regardless of conductor material or age.

For network asset managers thinking in 40-year horizons, this track record provides confidence. For project managers coordinating mixed-vintage network upgrades, it means fewer variables to manage. And for design estimators

working from approved product libraries, Bowthorpe's established presence in New Zealand specifications simplifies the path from design to delivery.

The HD Series suits bare conductor applications where compatibility across conductor types matters—particularly in networks where proven, predictable behaviour reduces project risk. Whether you're maintaining existing infrastructure or extending established overhead systems, these connectors bring the certainty that comes from seven decades of New Zealand service.



**Bowthorpe HD Series** Line Taps

## Return of the HD20

In response to demand for the largest Bowthorpe Line tap Hiko Power Engineering ever made we are pleased to re-introduce the Bowthorpe HD20 Line Tap (last seen in a 1970 catalogue and referred to as the HD46!).

When faced with connecting 3 earthing cables each 95mm<sup>2</sup> fitters were experiencing connector breakages or stripping threads using their existing connection hardware. When Mike Scott was asked what we could do he brought the challenge to his engineering colleagues at Hiko Power.

**For design estimators:** Available from Hiko stock. Specification sheets at [hikopower.co.nz/bowthorpe](http://hikopower.co.nz/bowthorpe)

Initial research showed us the giant was missing from the current Bowthorpe HD (Heavy Duty) line up and so rather than reinvent the wheel we simply dug out the specifications of the HD46, renaming it the HD20 – being the next size up from the HD18.

Rated for conductor cross sections from 95–185 mm<sup>2</sup> and application diameters from 11.1–18.5 mm, the HD20 accommodates a wide range of stranding configurations, supporting both compact and larger conductors. The long forks easily accommodate 3 x 95mm<sup>2</sup> cables allowing the nut to be tightened with all its threads in contact with the bolt. This eliminates the risk of nut threads stripping and/or failure by collapse as the required torque pressure is reached.

The Bowthorpe HD20 extends the range to give the same dependable performance, consistency, and installation confidence when it matters most. Being built to Hiko Power's exacting standards, the HD20 Line Tap reflects our commitment to listening to the market, and delivering solutions utilities and contractors can trust — for strength, repeatability, and long-term service integrity.

## Designed for Safety and Clarity

**EFEN LV Vertical Fuse Switch Disconnects** are engineered to prioritise what matters most: reducing field risk for technicians working in confined spaces, often with public exposure nearby.

Arc-flash mitigation, visual isolation clarity, and intuitive operation have become essential requirements for modern network design.

The vertical format delivers immediate visual confirmation of the isolation state, enabling technicians to see at a glance whether equipment is live or isolated.

For network asset managers focused on safety-first infrastructure, EFEN's design supports the thinking-safe culture that protects both workers and communities. For design estimators specifying LV equipment, the vertical configuration integrates efficiently into space-constrained cabinet layouts. And for project managers coordinating field installations, clearer isolation status means faster, more confident work—reducing time on site without compromising safety protocols.

The vertical format proves particularly valuable where cabinet depth is limited and multiple technicians may need to work around the same equipment.

Lead times and configuration options available from the Hiko technical team.



**EFEN** LV Vertical Fuse Switch Disconnects

## Where the Network Meets the Public – Going Underground



Urban densification is reshaping how distribution networks integrate with communities.

As cities grow denser, assets increasingly share space with footpaths, property boundaries, and high-traffic pedestrian areas. For network planners and project managers, this creates an opportunity to design infrastructure that serves both electrical requirements and public amenity.

Hiko UDP In-Ground Distribution Boxes place distribution equipment below ground level, removing exposed live components from public interfaces. The result is cleaner streetscapes, reduced visual impact, and infrastructure that coexists safely with the communities it serves.

The design reflects decades of learning from New Zealand conditions. Moisture management, traffic loading tolerance, and installation repeatability have all shaped the engineering—ensuring reliable performance across the varied environments NZ networks encounter.

For network asset managers balancing 40-year infrastructure decisions with community expectations, in-ground distribution supports both reliability objectives and public safety outcomes. For project managers coordinating urban installations, the UDP's proven installation methodology reduces on-site variables. And for design estimators specifying equipment in space-constrained locations, these units offer a solution purpose-built for the challenge.

When infrastructure needs to be present but unobtrusive, in-ground distribution delivers.



## Designing for the Next 40 Years, Not Just Installation Day

As assets become more compact and underground infrastructure more prevalent, civil and electrical coordination is becoming critical. The traditional approach—build the civil structure, then figure out the electrical fit-out—creates constraints that compound over the asset lifecycle.

Langmatz Modular Structural Pits and Equipment Vaults separate structural load paths from electrical installation. This allows networks to stage installations, plan for future upgrades, and conduct maintenance without full civil reconstruction.

The benefit isn't visible on installation day. It emerges over time—faster access for planned maintenance, safer working conditions and fewer compromises when assets need to change or expand.

### When to specify

Most effective when included early in project planning, as part of a broader underground infrastructure strategy. Retrofitting modularity is always more expensive than designing it in.



Langmatz Modular Structural Pits

## Reducing Failure Through Consistency



Across electricity networks, jointing and termination quality directly impacts network reliability.

When outages occur, root cause analysis frequently identifies the same factors: installation variability, environmental exposure during installation, and material aging over time. NKT MV & HV Cable Joints, Terminations and Connectors are engineered around one core principle—controlled, consistent installation outcomes. Every component uses proven materials and sealing systems designed to reduce dependence on individual installer interpretation. The result is consistency that translates directly to network performance.

For network asset managers tracking SAIDI/SAIFI metrics, consistent jointing quality means fewer unplanned outages and more predictable maintenance cycles. For project managers working under time pressure with constrained site access, NKT's installation methodology delivers reliable results even when conditions aren't ideal. And for engineering consultants specifying cable accessories, comprehensive type

test data supports technical due diligence and compliance documentation.

In New Zealand's varied environments—coastal humidity, temperature cycling, confined underground installations—reducing variables isn't just good practice. It's a reliability strategy that protects both network performance and the communities depending on consistent power delivery.



NKT Terminations

## When Moisture Is the Real Enemy

Medium-voltage terminations fail for many reasons, but moisture ingress at the interface remains one of the most common.

Traditional heat-shrink methods work well when installation conditions are controlled—but controlled conditions aren't always available.

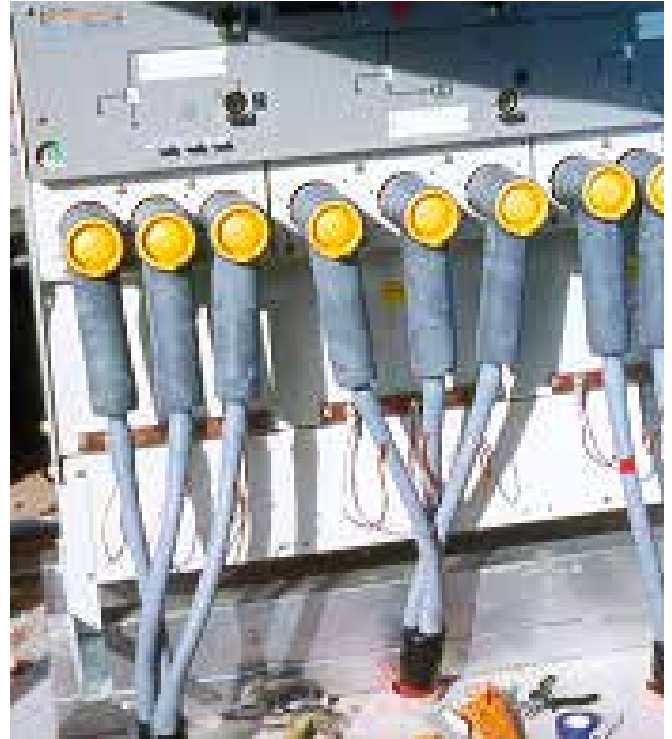
NKT Cold Applied 11/22 kV Termination Shrouds address this by eliminating heat and reducing installation steps. Fewer variables mean fewer failure modes.

### The trade-off

Using the NKT termination shroud can in some instances offer less flexibility in exchange for more predictable long term performance. The trade off is whether you want to prioritise consistent outcomes over installation day adaptability.

### Environmental fit

Particularly effective where outage windows are tight, weather conditions are unpredictable, or installer access to the site is limited.



NKT Cold Applied 11/22 kV Termination Shrouds

## Material Discipline for Harsh Environments

Outdoor terminations face UV, pollution, salt spray, and temperature cycling—sometimes all at once.

Coastal and industrial sites accumulate degradation slowly, then fail suddenly. By the time tracking or erosion becomes visible, remediation options are limited.

NKT Silicone Outdoor Terminations are specified not for convenience, but for resistance to the long-term degradation mechanisms that matter most in New Zealand conditions.

### Where the value shows

When you factor in the full lifecycle of an asset—from installation through to future maintenance or replacement—access matters.

That's where NKT Silicone Outdoor Terminations prove their worth. Designed to handle New Zealand's coastal salt spray, UV exposure, and unpredictable weather, they're engineered for the environments that test equipment the hardest.



NKT Silicone Outdoor Terminations

**For asset managers:** Long-term performance data available. Suitable for inclusion in coastal corrosion zone specifications.

## Speed Without Sacrificing Control

Outage duration and labour variability are real risks. Complex installation procedures extend outages, increase error rates, and stress project timelines.

NKT Pre-Moulded Cold Applied Slipover Terminations deliver fast, controlled installation with consistent geometry and insulation thickness every time. The pre-moulded design removes variability from the equation—installers achieve reliable results without complex procedures or specialist interpretation.

For project managers coordinating tight outage windows, reduced installation time means more work completed per shutdown and fewer delays to explain to stakeholders. For design estimators specifying cable accessories, standardised terminations simplify procurement and integrate seamlessly into established network configurations. And for engineering consultants reviewing installation methodology, consistent geometry supports predictable long-term performance.

The cold application process eliminates heat-related installation risks, making these terminations well-suited to confined spaces and temperature-sensitive environments common across New Zealand networks. From urban substations to rural distribution points, the combination of speed and precision supports both immediate project delivery and lasting network reliability.



NKT Outdoor SOT

## Earthing: The Foundation Nobody Sees Until It Matters



Storm events are exposing failure modes that don't show up in normal operation.

Earthing system performance under fault conditions depends on connections that are buried, encased, and often forgotten after installation.

REBAR Earth Bonding Anchors address the interface between reinforcement steel and electrical earthing in concrete foundations. A reliable bonding point supports continuity, corrosion resistance, and inspection confidence across the system.

### When it matters

The value is rarely visible day-to-day. During extreme events—lightning, faults, equipment failures—earthing systems either behave as designed or they don't. The REBAR approach helps ensure earthing performs as a system, not a collection of parts.



Hiko Rebar Earth Bonding Anchors

**For design engineers:** Specification guidance for foundation earthing integration available. Suitable for inclusion in seismic and storm resilience planning.



# Hiko 2025 Year in Review

Reflecting on the past year, it's clear that our strength lies in the balance between heritage and innovation. We aren't just selling parts; we are supporting the long-term stewardship of New Zealand's distribution networks. From securing global supply agreements to celebrating 20-year staff milestones, every achievement listed here is designed to ensure that the choices you make today remain the right ones for the next generation of engineers.

— Geoffrey Sullivan, General Manager



## Safety

### 3 Global Standards

Successfully passed surveillance audits for ISO 9001, 14001, and 45001.

### 100% Driver Training

All Account Managers completed Defensive Driver training for accident avoidance.

### Risk Focus Design Practice

Conducted comprehensive risk assessments across all product categories.



## People

### 50% Veteran Staff

Half of our team has now passed their 10-year work anniversaries.

### 20 Year Service Milestones

Celebrated 20 years with GM Geoffrey Sullivan and specialist Jenny Wallace.

### Trusted Partner Customer NPS

Our biennial survey shows customers rate our technical expertise as a key strength.



## Infrastructure

### 2 International Patents

The Hiko U-Pillar is now patented in both New Zealand and Australia.

### 220kV Transpower Agreement

Secured the supply agreement for CTs and CVTs alongside Sieyuan and Insulect.

### Same-day Busbar Production

FAT completed for our new EMAC BP-40 Busbar Processing Machines



## Environment

### Year 2 Emissions Reporting

Completed our second year of carbon mapping for all operations.

### Supply Chain Efficiency Focus

Identifying ways to improve supply efficiencies and freight reduction.

### Community Engagement

Sponsored the Annual Connections, the NP Social Club Fishing Competition and the EEA2025 Conference.