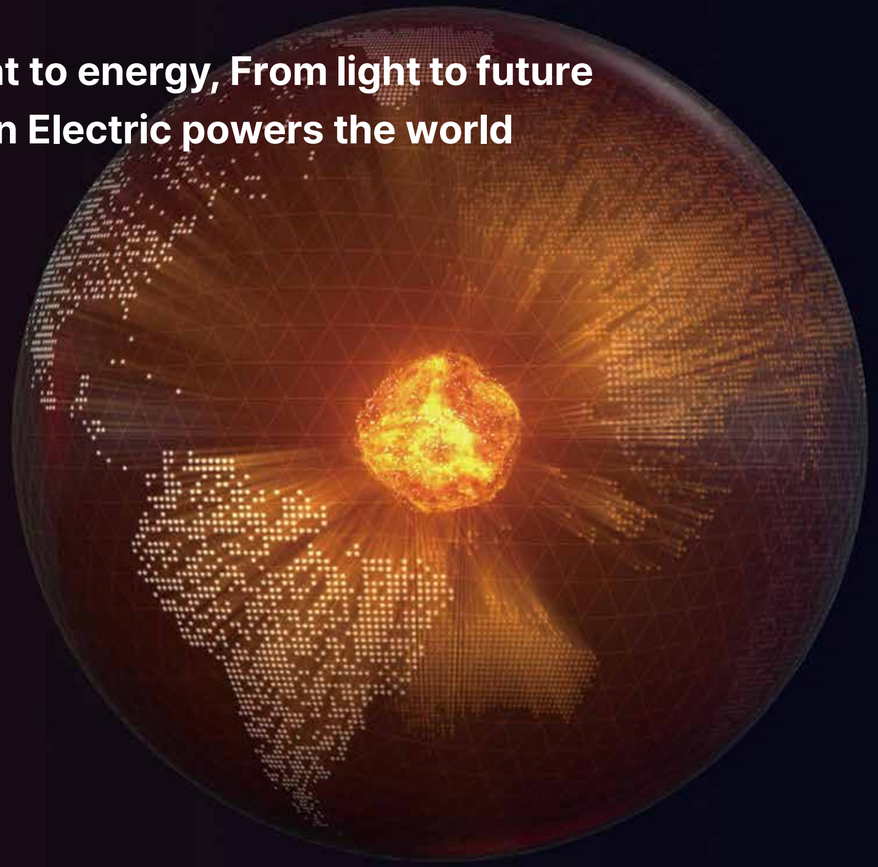
Poongsan Electric
Powered by Trust
PoongsanElectric
www.pec.co.kr

From light to energy, From light to future
Poongsan Electric powers the world



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Company Overview

To deliver technology that lights the world,
Poongsan Electric never stops innovating.

Poongsan Electric provides energy that keeps the world moving.
Our steady growth over the years has been driven by innovation and ESG management.

Behind every product and service is our commitment to quality, on-time delivery, and dedicated customer support. Putting customers first is our core value.

Poongsan Electric is more than a manufacturer—we are a trusted partner that grows together with our customers.

We believe in honoring God and loving people. This commitment has guided us to where we are today and will continue to lead us into the future.

Proven quality, relentless innovation, and shared growth.
Poongsan Electric is committed to delivering energy for a brighter future.

01 Innovation & Progressiveness
+
02 Quality Excellence
+
03 Reliable Support & Fast Delivery
+
04 Sustainability & Social Value

History

Built on sustainable values, **Poongsan Electric's journey** continues toward a brighter tomorrow.

Beginning

1900s

1996 ISO 9001 certification obtained

1985 Korean Standard (KS) product certification obtained

1978 Poongsan Electric established; delivery of transformers to Korea Electric Power Corporation commenced.

A Sustainable Power Solutions Company

Growth

2000s

2008 Named a "Promising SME" by Shinhan Bank.

2006 Developed the world's first transformer using Cargill's eco-friendly transformer oil, Bio-Trans 5000.

2003 In-house R&D center established

2001 ISO 14001 certification obtained

Innovation

2010s – Present

2025 Delivery to Qatar Steel commenced as a contracted supplier

2023 ISO 45001 certification acquired
Registered as a supplier for CLP Power Hong Kong after successful transformer type test

2019 Received the Minister's Award from the Ministry of SMEs and Startups
Officially recognized as a Trusted Partner of Korea Electric Power Corporation

2014 Recognized as a Model SME by Korea Electric Power Corporation

2013 KEPCO Trusted Partner Designation

2012 CEO Hong Dae-Hee appointed
36 units of 2MVA vegetable oil transformer exported to Hong Kong data center

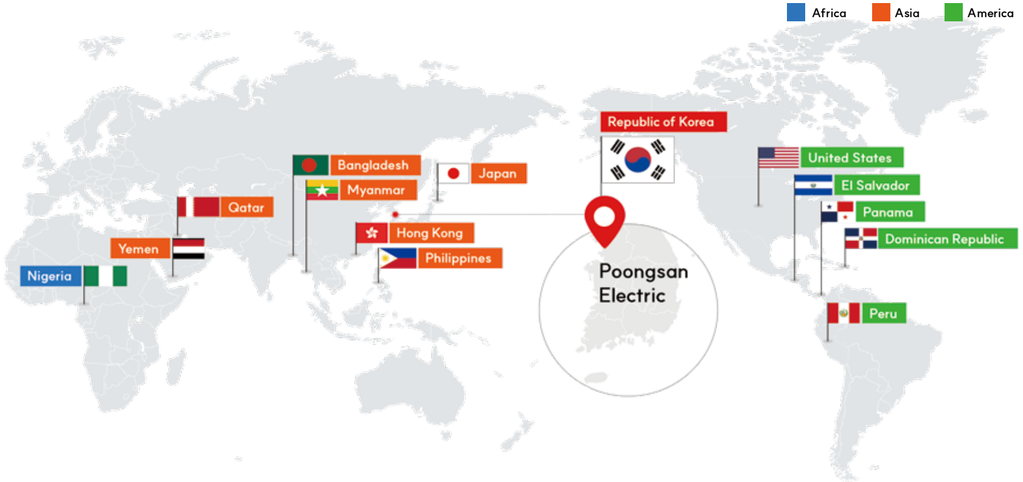
2011 Vegetable oil power transformers exported to Hong Kong

2010 Underground transformers exported to North America
Selected for the One-KEPCO Export Business Group

Global Partnership

A Trusted Customer in **Power Technology with a Proven Global Track Record.**

Through partnerships with power authorities across Asia, the Middle East, and the Americas, Poongsan Electric delivers trusted power solutions to the global market.



Over 50,000 units exported oversea

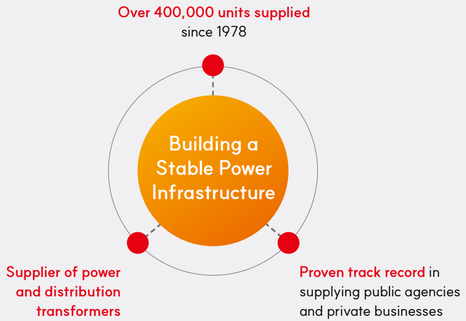
Trusted supplier to utilities **electric cooperatives, government & industrial sectors authorities worldwide**

Proven global track record in power and distribution and transformer solutions

Domestic Partnership

A Trusted Customer who has Built Domestic Power Infrastructure Together

Poongsan Electric has contributed to the establishment of a stable power infrastructure through long-term partnerships with major domestic power companies and industrial customers.



Defense Agencies

- Republick of Korea ARMY
- Republick of Korea AIR FORCE
- REPUBLIC OF KOREA NAVY

Public Institutions

- kepco
- Incheon Airport
- PORT OF INCHEON
- 한국지역난방공사 KOREA DISTRICT HEATING CORP.
- Korea Rural Community Corporation
- 한국전기안전공사
- 한국환경공단
- 대구공공시설관리공단 Daegu Public Facilities Corporation
- 광명시

Major Corporations

- posco
- Trescal
- ONEGENE The Best One

University

- KAIST

Power Transformer

Our power transformers reliably convert large volumes of electricity in high-voltage transmission systems, serving as a core component of the power grid.

Product

Power Transformer

A transformer designed to serve as the backbone of the power grid by reliably converting large volumes of electricity in extra-high-voltage applications.

Technical Specification

Production Capability

Rating	1MVA ~ 40MVA
Primary Voltage	3.3kV ~ 69kV
Secondary Voltage	3.3kV ~ 23kV
Frequency	50Hz or 60Hz
Phase	Single or Three

Options

On-load tap changer(OLTC), Nitrogen gas cushioning system,
Natural ester insulating fluid(FR3), Surge arresters,
Winding temperature indicator, Rapid pressure rise relay, and more

Distribution Transformer

Our distribution transformers step down electricity supplied from substations to ensure a stable supply to end users.

Distribution Transformer

Transformer filled with Natural Ester

Vegetable-based transformer oils have an exceptionally high flash point, greatly reducing the risk of fire. Their outstanding insulation performance and thermal stability enhance transformer lifespan and reliability.

Technical Specification

Production Capability

Rating	1MVA ~ 40MVA
Primary Voltage	3.3kV ~ 69kV
Secondary Voltage	3.3kV ~ 23kV
Frequency	50Hz or 60Hz
Phase	Single or Three

Options

On-load tap changer(OLTC), Nitrogen gas cushioning system, Surge arresters, Stainless steel tank, and more

Distribution Transformer

Pad Mounted Transformer

An enclosed transformer designed for ground-level installation minimizes the risk of external shock and accidental contact, ensuring safe power supply to urban and industrial areas.
A safe and aesthetically designed solution suitable for various power distribution applications.

Technical Specification

Production Capability

Rating	45kVA to 10,000kVA
Primary Voltage	2.4kV ~ 34.5kV
Secondary Voltage	120V ~ 23kV
Frequency	50Hz or 60Hz
Phase	Single or Three

Electrical Configuration

Power Feed Type : Radial Feed or Loop Feed
Connection Type : Deadfront or Livefront

Options

Loadbreak switch, Circuit breaker, Magnex, Stainless steel tank, Natural ester insulating fluid(FR3), Surge arresters, and more

Distribution Transformer

Pole Mounted Transformer

A transformer installed on utility poles for power distribution to end users. Widely applied to rural areas and general power distribution settings for ease of installation and high economy.

Technical Specification

Production Capability

Rating	5kVA to 500kVA
Primary Voltage	2.4kV ~ 35kV
Secondary Voltage	600V& BELOW
Frequency	50Hz or 60Hz
Phase	Single or Three

Options

Amorphous core, Circuit breaker, Liquid level gauge, Drain valve, Vegetable oil insulating oil (Natural esters, FR3 fluid), Surge arrestors, etc

Distribution Transformer

Low Noise Transformer

A transformer with an optimally engineered core and structure designed to minimize operating noise. Ideal for residential areas, hospitals, schools, and other noise-sensitive environments.

Technical Specification

Production Capabillity

Rating	100kVA to 20MVA
Primary Voltage	3.3kV ~ 35kV
Secondary Voltage	23kV & Below
Frequency	50Hz or 60Hz
Phase	Single or Three

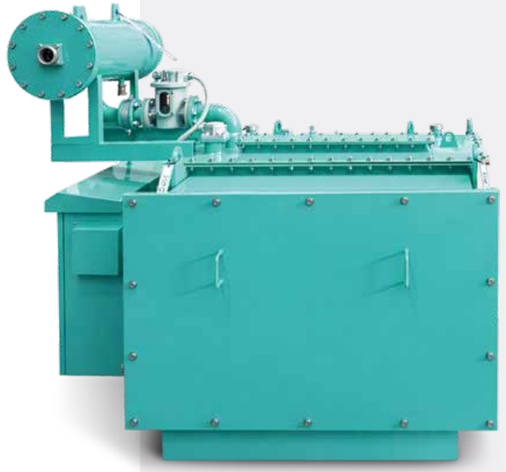
Options

Winding temperature indicator(WTI), Rapid pressure rise relay, Natural ester insulating fluid(FR3), Surge arresters, and more

Distribution Transformer

Earthing Transformer

A transformer designed to control ground fault current through the neutral point of the power system,ensuring system protection and operational stability.



Technical Specification

Production Capability

• **Rating**	100kVA to 20MVA
• **Primary Voltage**	3.3kV ~ 35kV
• **Frequency**	50Hz or 60Hz
• **Phase**	Single or Three

Options

Winding temperature indicator(WTI), Rapid pressure rise relay, Liquid level gauge, Natural ester insulating fluid(FR3), Surge arresters, and more

Distribution Transformer

Isolation Transformer

A transformer with two electrically isolated stages designed to protect property and people from electrocution, electrical noise, and power surges. Recommended for applications where safety and power quality are critical.

Technical Specification

Production Capability

• **Rating**	1MVA to 20MVA
• **Primary Voltage**	11kV to 35kV
• **Secondary Voltage**	11kV to 35kV
• **Frequency**	50Hz or 60Hz
• **Phase**	Single or Three

Options

Winding temperature indicator(WTI), Rapid pressure rise relay, Liquid level gauge, Natural ester insulating fluid(FR3), and more

Distribution Transformer

Dual Voltage Transformer

A transformer that allows selection between two voltage levels. Ideal for applications with varying voltage requirements and international systems requiring flexibility.

Technical Specification

Production Capability

• **Rating**	100kVA to 20MVA
• **Primary Voltage**	11/6.6kV to 35/24kV
• **Secondary Voltage**	120V to 6.6kV
• **Frequency**	50Hz or 60Hz
• **Phase**	Single or Three

Options

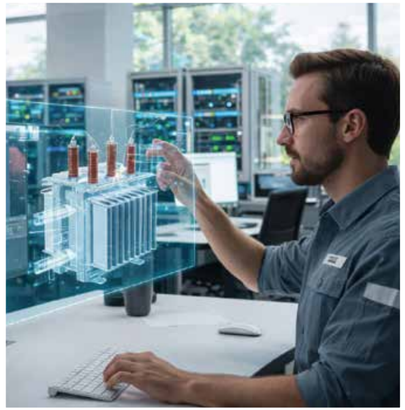
Winding temperature indicator(WTI), Rapid pressure rise relay, Liquid level gauge, Natural ester insulating fluid(FR3), Surge arresters, and more

Technology

Dependable solutions that perform in the field matter more than visual specifications. Every process is carefully verified to ensure that even the smallest differences never compromise overall quality.

Natural Ester Transformers

An eco-friendly and safe power technology



Poongsan Electric commercialized Korea's first vegetable oil transformer in 2005 and has since led the development of eco-friendly transformer technology.

Natural ester transformers use biodegradable insulating oil derived from natural esters.

This environmentally friendly fluid is ideal for high-voltage power equipment and helps minimize environmental impact while improving safety for people and surrounding ecosystems.

Natural Ester Transformers

Key Features

Poongsan Electric's natural ester transformers are a next-generation eco-friendly energy solution that provides environmental protection, enhanced fire safety, and long-term reliability. Vegetable-derived natural esters address the limitations of conventional mineral oil transformers. Natural ester transformers provide safe and sustainable energy for urban and suburban areas as well as public infrastructure.

Environmental Characteristics

Natural ester transformers utilize non-toxic, biodegradable natural esters to provide eco-friendly insulation

- Tested for non-toxicity
- Biodegradable
- Minimal risk of soil and water pollution
- Supports compliance with environmental regulations

• CERTIFIED NON -TOXIC TEST REPORT

• CERTIFIED BIODEGRADA -TION TEST REPORT

Performance Characteristics

Slows the deterioration of insulating paper inside the transformer, ensuring stable performance during prolonged operation

- Significantly extended insulating paper lifespan
- Reliable insulation during extended high-temperature operation
- Extended overall transformer lifespan
- Reduced maintenance costs

Fire Safety Characteristics

Compared with conventional mineral oil, it offers significantly higher flash and fire points, greatly reducing fire risk.

- Flash & Fire points above 300°C
- Reduced risk of fire spread
- Safe for installation in urban and suburban areas
- Enhanced protection for workers and facilities

Sealed recharge aging test Improved lifespan of insulation paper by applying natural ester insulating oil

	0 hr	250 hr	505 hr	750 hr	1000 hr	1500 hr	3002 hr
Envirotemp FR3 Fluid	100% T.S.	78% T.S.	68% T.S.	62% T.S.	56% T.S.	50% T.S.	40% T.S.
FR3 Retrofill	21486 psi	74% T.S.	56% T.S.	53% T.S.	45% T.S.	45% T.S.	35% T.S.
Mineral Oil	100% T.S.	74% T.S.	54% T.S.	19% T.S.	5% T.S.	0.5% T.S.	Too Brittle

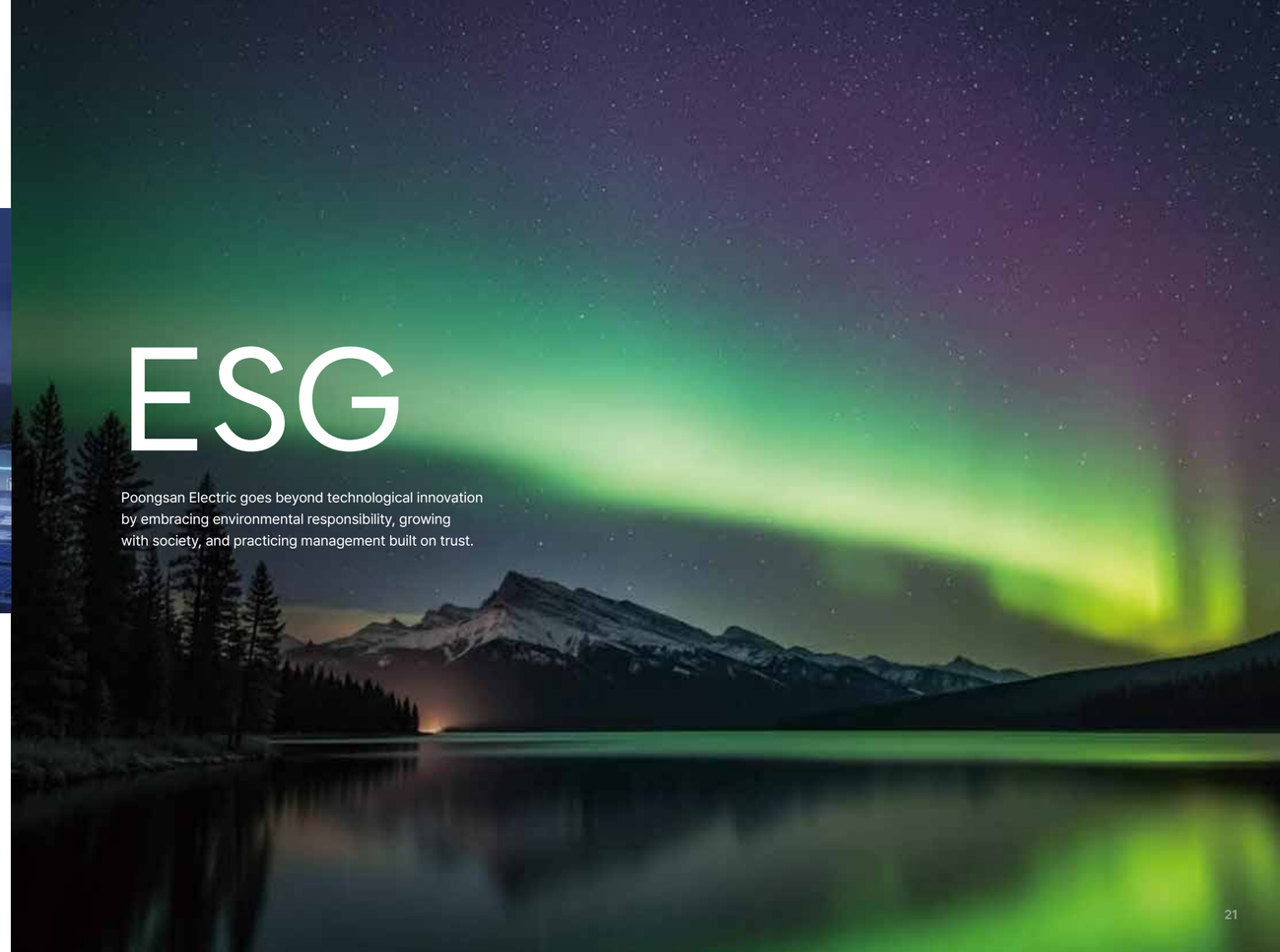
Natural Ester Transformers

Application

- Pole Mounted Transformers
- Pad Mounted Transformers
- Distribution Transformers
- Power Transformers

Pad Mounted Transformer 1MVA, Panama

Distribution Transformer 2MVA, Hong Kong



ESG

Poongsan Electric goes beyond technological innovation by embracing environmental responsibility, growing with society, and practicing management built on trust.

Poongsan Electric **Cares for the Environment, Respects People, and Grows on a Foundation of Trust.**

As a supplier of power infrastructure solutions, we believe that business growth and technological advancement must be accompanied by environmental protection, public well-being, and ethical business practices.

Sustainability is not just a goal or a noble declaration. We pursue sustainability as a guiding principle in every decision we make—from product development and manufacturing to quality control, customer service, and business management.

As an established industry leader committed to creating social value, we supply eco-friendly power technologies that reduce environmental impact, give back to the communities that support us, and practice transparent and structured governance.

Poongsan Electric is committed to advancing sustainable energy through quality and accountability.

Environment

- World's First Cargill Bio-Trans 5000 Vegetable Oil Transformer (2005)
- First to Introduce in Korea & Supply to KEPCO
- Pioneer of the Eco-friendly Transformer Market

Social

- Continuous Social Contribution Since 1978
- Annual Donations for Community Support
- Scholarships & Ongoing Social Initiatives

Governance

- Ethics, Transparency & Accountability
- Compliance with Laws & Regulations
- Long-term Value & Stakeholder Trust

Responsible Management for a Sustainable Future

Responsible Innovation

Innovation in technology to improve energy efficiency and reduce environmental impact.

Eco-friendly materials and advanced engineering for sustainable energy solutions.

Shared Value

Respect for people and society as the foundation for shared growth with employees, partners, and local communities.

Commitment to sharing and coexistence by giving back to the community.

Trustworthy Management

Transparent management based on ethics and principles to build stakeholder trust.

Responsible decision-making with a long-term perspective for sustainable business growth.

PoongsanElectric

Poongsan Electric Powered by Trust

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