TRANSFORMER ACADEMY

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STRATEGIC SOURCING FOR POWER TRANSFORMERS course

Niël Malan

Course author

Niël has 30 years' experience in Electrical Engineering, Commercial and Supply Chain in the utility industry across Generation, Transmission and Distribution. He led and implemented a successful strategic sourcing methodology for the Power Transformer Category on group level, securing strategic partnering with global Transformer manufacturers, to secure supply for best transformer technologies and optimized total cost of ownership.

What makes this course unique?

This course provides a structured and practical understanding of strategic sourcing for power transformers, combining procurement strategy, supplier evaluation, contracting, negotiation, and supplier management into a single end-to-end sourcing programme. Rather than focusing solely on purchasing activities, the course explains how strategic sourcing supports long-term supply security, cost optimization, risk management, and transformer lifecycle performance.

A strong emphasis is placed on fact-based decision-making, cross-functional collaboration, supplier governance, and the development of sourcing strategies aligned with business objectives and market conditions. The programme integrates commercial, technical, and operational considerations, reflecting real-world sourcing practices used by utilities, industrial asset owners, EPC contractors, and transformer manufacturers operating in increasingly complex global supply chains.

Target Audience

The course is intended for procurement professionals, sourcing specialists, supply chain managers, utility engineers, project managers, transformer manufacturers, asset managers, and business leaders involved in transformer acquisition, supplier management, and strategic procurement activities.

It is also suitable for professionals seeking to better understand how transformer sourcing decisions influence cost, risk, supplier performance, and long-term asset-management objectives. Previous experience in procurement or transformer technology is beneficial but not mandatory.

Course Programme Type

Professional Certificate / Continuing Education Programme

Course Programme Duration

4 e-lessons (sequential), equivalent to approximately 4 hours of guided learning, supported by additional independent study depending on participant background and prior experience.

Programme Purpose

The Strategic Sourcing for Power Transformers programme is designed to provide participants with a structured understanding of how sourcing strategies are developed, implemented, and managed throughout the transformer procurement lifecycle. The course explains how organizations can move beyond transactional purchasing approaches by applying strategic sourcing methodologies that improve supply security, strengthen supplier relationships, reduce risk, and create long-term business value. Participants gain practical insight into supplier selection, tendering processes, contract negotiation, governance requirements, and supplier performance management.

Special attention is given to the unique challenges associated with sourcing power transformers, including limited supplier capacity, long manufacturing lead times, technical complexity, market volatility, and lifecycle cost considerations. The programme demonstrates how sourcing decisions influence not only procurement outcomes, but also long-term asset performance and organizational resilience.

Programme Competency Outcomes

Upon completion, participants will be able to:

- Explain the principles of strategic sourcing and its application to power transformer procurement and supply-chain management.
- Develop and evaluate sourcing strategies that align business objectives, technical requirements, market conditions, and supplier capabilities.
- Apply structured supplier-screening, evaluation, and selection methodologies using objective and measurable criteria.
- Distinguish the roles of RFIs, RFPs, tender evaluations, and commercial events within transformer sourcing programmes.
- Assess supplier capabilities, sourcing risks, and market conditions to support informed procurement decisions.
- Apply negotiation principles and contract-development practices to achieve sustainable and commercially balanced agreements.
- Explain the governance, compliance, confidentiality, and stakeholder-management requirements associated with strategic sourcing activities.
- Develop implementation, supplier-management, and performance-monitoring approaches that support successful contract execution.
- Evaluate supplier performance and supplier-development opportunities to improve long-term sourcing effectiveness, reliability, and business value.

Standards Alignment

Course programme content aligns with:

- Recognized international strategic sourcing and supply-chain management practices
- Procurement governance, supplier-evaluation, and contract-management frameworks commonly used in utility and industrial sectors
- International best practices for supplier relationship management, performance management, and continuous improvement
- Asset-management principles supporting long-term infrastructure planning and supply security
- Industry practices related to power transformer procurement, supplier qualification, contract execution, and lifecycle value optimization

e-lesson #1

Introduction to Strategic Sourcing for Power Transformers

Key focus

To understand the principles of strategic sourcing and its role in managing transformer cost, risk, supply security, and lifecycle performance.

Lesson description

This lesson introduces the concept of strategic sourcing for power transformers and explains why it has become increasingly important in a market shaped by supply-chain volatility, energy transition initiatives, and growing demand for grid infrastructure. It examines the characteristics of the transformer industry, including limited supplier availability, customised products, and long asset lifecycles. The session presents the foundations of a strategic sourcing methodology, including cross-functional sourcing teams, stakeholder engagement, governance structures, and lifecycle-oriented decision-making. Particular attention is given to total cost of ownership, risk mitigation, supplier collaboration, and the seven-step sourcing process used to support long-term transformer procurement strategies and asset-management objectives.

Learning outputs

- Explain the purpose of strategic sourcing and its role in supporting transformer procurement, cost management, and risk mitigation.
- Describe the key characteristics of the power transformer market, including supply-chain constraints, supplier concentration, and lifecycle considerations.
- Identify the roles of sourcing teams, technical specialists, stakeholders, and governance structures within a strategic sourcing programme.
- Distinguish strategic sourcing from traditional purchasing approaches and explain the importance of total cost of ownership in transformer decision-making.
- Outline the main stages of the transformer sourcing process and assess how lifecycle management supports long-term asset performance and supply security.

e-lesson #2

Sampling Oil for DGA: Frequency and Safety Considerations

Key focus

To understand how data-driven sourcing strategies are developed to align transformer procurement with business objectives, market conditions, and lifecycle value.

Lesson description

This lesson examines the strategy-development phase of strategic sourcing for power transformers. It explains how organizations move from stakeholder alignment and requirement definition toward the creation of structured sourcing strategies based on factual analysis. The session reviews cross-functional team charters, stakeholder engagement, internal and external profiling, spend analysis, supplier assessment, and market evaluation. Particular attention is given to total cost of ownership (TCO), value creation opportunities, sourcing governance, and the use of industry and business data to support decision-making. The lesson concludes by explaining how sourcing strategies are developed, evaluated, and approved to secure long-term supply, optimize costs, and support transformer lifecycle objectives.

Learning outputs

- Explain the purpose of strategic sourcing strategy development and its role in securing long-term transformer supply and business value.
- Describe the process of establishing cross-functional sourcing teams, stakeholder alignment, and sourcing-charter development.
- Identify the key internal and external data sources used to evaluate transformer spending, suppliers, market conditions, and business requirements.
- Distinguish the factors that contribute to total cost of ownership and explain their influence on transformer sourcing decisions.
- Assess value opportunities, sourcing risks, and market conditions in order to develop and support an effective transformer sourcing strategy.

e-lesson #3

Power Transformer Contracting

Key focus

To understand how structured contracting processes transform sourcing strategies into negotiated agreements that secure supply, manage risk, and deliver long-term value.

Lesson description

This lesson examines the contracting phase of strategic sourcing for power transformers and explains how organizations move from sourcing strategy to supplier selection and contract award. It reviews supplier screening, selection criteria, commercial-event management, tender evaluation, and negotiation practices used to support effective procurement decisions. The session explores the use of requests for information (RFI) and requests for proposals (RFP), evaluation methodologies, governance requirements, and cross-functional decision-making processes. Particular attention is given to negotiation planning, supplier engagement, contract development, compliance requirements, confidentiality, and the management of contractual risks associated with transformer procurement and supply.

Learning outputs

- Explain the purpose of the contracting phase and its role in translating sourcing strategies into executable supply agreements.
- Describe the processes used to identify, screen, evaluate, and shortlist transformer suppliers using objective selection criteria.
- Distinguish the functions of RFIs, RFPs, tender evaluations, and commercial events within strategic sourcing activities.
- Assess how negotiation, supplier engagement, and governance processes contribute to contract quality, risk management, and value creation.
- Identify the key contractual, technical, commercial, and compliance considerations required to support successful transformer procurement and long-term supplier relationships.

e-lesson #4

Supplier Management and Development

Key focus

To understand how supplier-management practices support contract implementation, performance improvement, compliance, and long-term value creation in transformer sourcing.

Lesson description

This lesson examines the supplier management and development phase of strategic sourcing for power transformers. It explains how organizations transition from contract award to supplier performance management, implementation, and continuous improvement. The session reviews implementation planning, communication processes, service-level agreements, performance measurement, compliance management, and stakeholder engagement required to support successful contract execution. Particular attention is given to supplier relationships, governance structures, performance criteria, benefit tracking, and the role of structured supplier-development activities in improving supply reliability, quality, and long-term sourcing outcomes.

Learning outputs

- Explain the purpose of supplier management and development within a strategic transformer sourcing programme.
- Describe the key activities required to implement sourcing agreements, including planning, communication, and stakeholder engagement.
- Identify the roles of service-level agreements, performance criteria, and compliance requirements in managing supplier relationships.
- Assess supplier performance using structured governance, reporting, and benefit-tracking approaches.
- Evaluate how supplier-development initiatives contribute to improved reliability, quality, risk management, and long-term sourcing value.