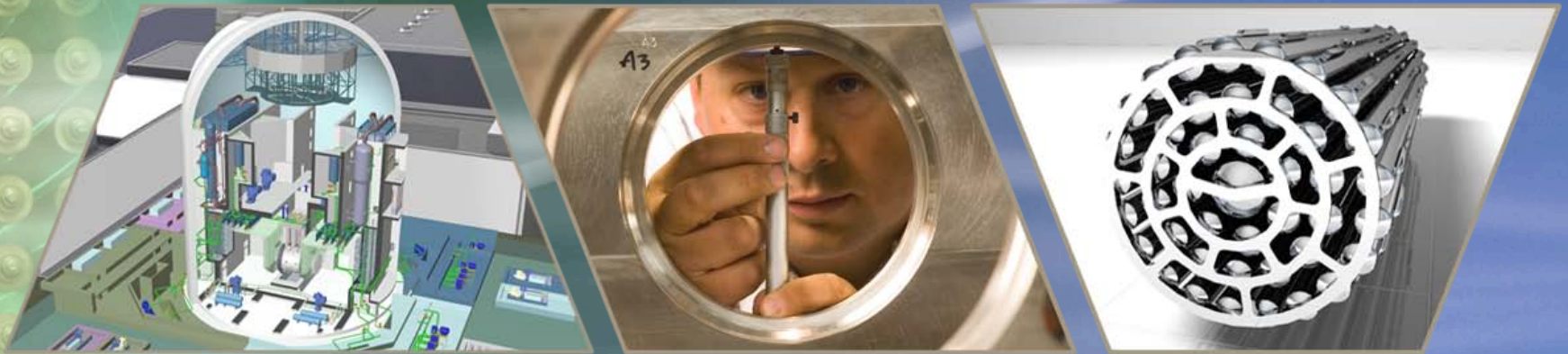


Atomic Energy of Canada Limited



AECL CANDU Supply Chain Forum

Saskatoon Saskatchewan

2010 – Nov – 30



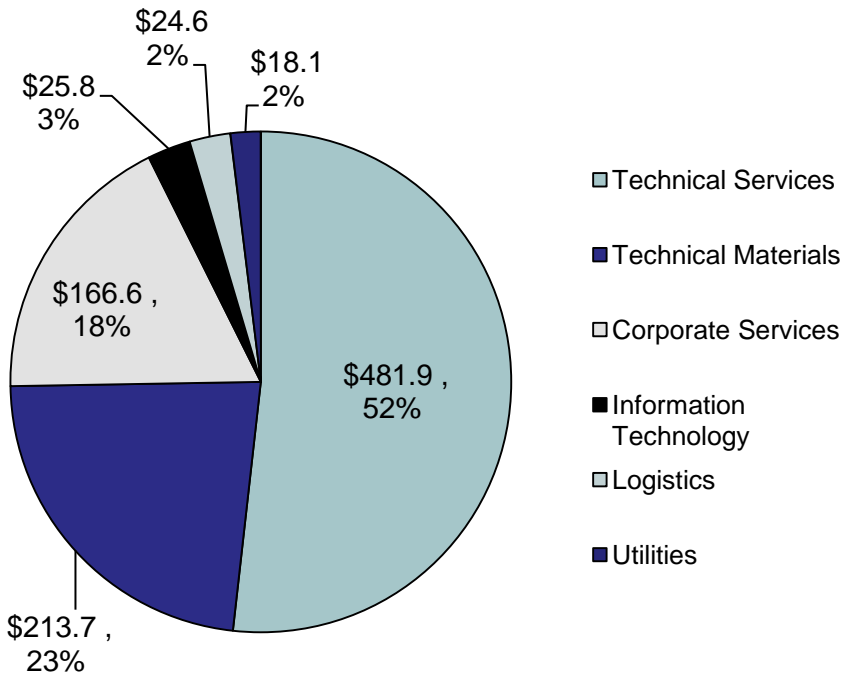
AECL Supply Chain

Peter Dalton
Director, Strategic Sourcing



AECL Purchased \$931 Million in Goods and Services Over the Last 12 Months

Split of AECL Purchased Goods by Category – Total \$931MM

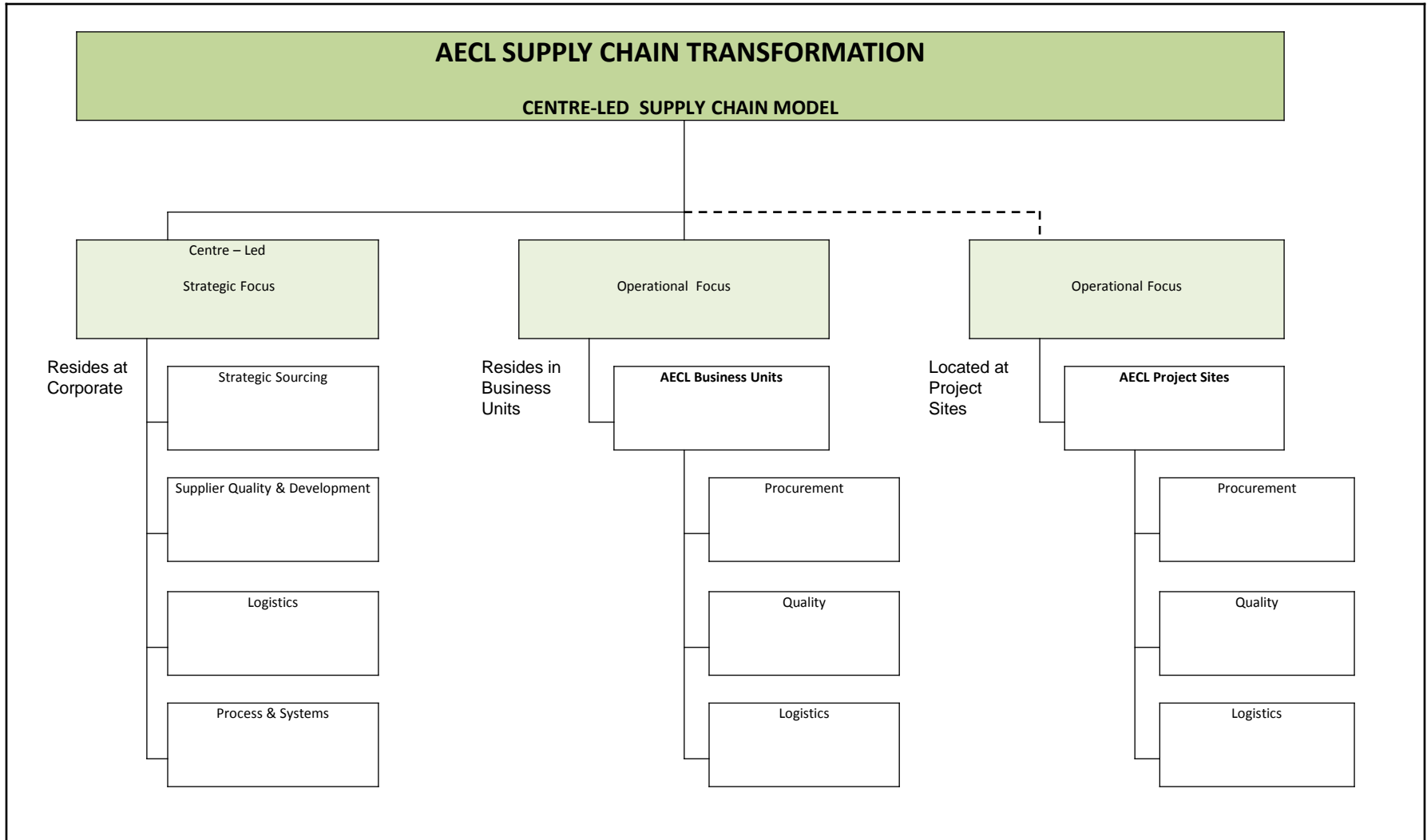


Category	Top Subcategory Examples
Technical Services	<ul style="list-style-type: none"> EPC (engineering, procurement and construction contracts) Maintenance Services Skilled Temporary Labor
Technical Materials	<ul style="list-style-type: none"> Automation Equipment Precision Materials, Major Plant Equip Welding Equipment MRO and Safety Supplies
Corporate Services	<ul style="list-style-type: none"> Insurance Taxes Professional Services Gov't and Regulatory Real Estate
Logistics	<ul style="list-style-type: none"> Fuel Ocean Freight Air Freight Waste Management
Information Technology	<ul style="list-style-type: none"> Hardware (desktops/laptops/servers) Telecommunications Software Printers and Copiers
Utilities	<ul style="list-style-type: none"> Electricity/gas/water etc.

Supply Chain Vision

To provide our internal and external customers with a capable and competitive supply chain at the most advantaged total cost of ownership (TCO).

Refocus of Procurement, Supplier Quality & Development



Strategic Goals

1. Pull all supply chain activity under Supply Chain
2. Improve supplier development and collaboration
3. Increase supply chain automation
4. Enhance people skills and capabilities

Strategy & Objectives

- 1. Put assurances in place to make sure savings hits the bottom line**
 - Absolute early supply chain involvement for all initiatives
 - One time 10-25% improvement, 5-6% annually
- 2. Adopt a total cost mindset**
 - Total supply chain costs and associated risks
- 3. Use an advantaged fact base**
 - Deep understanding of TCO, supplier chain economics, market dynamics
 - Target cost based on market research, root cause analysis
 - Comprehensive spend database to capture spend by category
- 4. Execute sourcing process with discipline**
 - Rigorous processes, systematic execution of end to end sourcing process
- 5. Develop win-win performance based relationships**
 - Performance based contracts

Strategy & Objectives

6. Real integration with product development

- Purchasing creates value by engaging with product development and our supply chain in real-time on TCO tradeoffs for different design choices

7. Value adding capability in supplier development

- Tie with commodity strategy, focus on core suppliers
- Clear metrics to measure impact, regular review process to measure progress

8. Global sourcing excellence

- Well defined aggressive sourcing strategy
- Understand total supply chain costs
- Adequate risk mitigation strategies in place

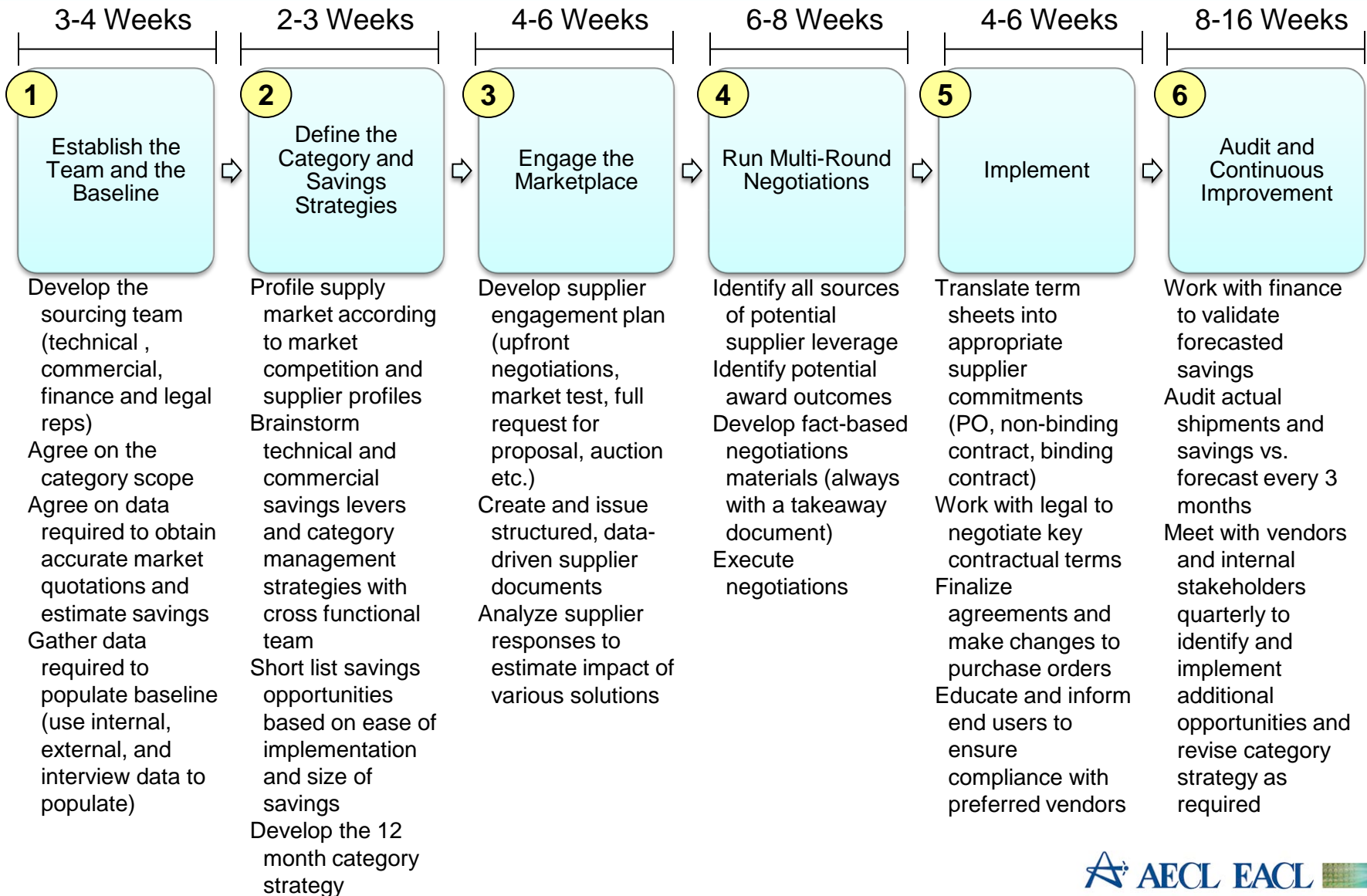
Key Elements of AECL's Strategic Sourcing Process

1. Requirements gathering: Define the category; Identify demand trends, constraints, specifications; Develop profile of total cost of ownership; Understand current sourcing processes and policies; Validate with key stakeholders
2. Market assessment: Evaluate market dynamics and projections; Identify supplier profitability drivers and success factors; Develop supplier portfolio (RFI's, etc.)
3. Sourcing strategy development: Determine business impact of category sourcing; Identify and agree upon target approaches: Volume concentration, global sourcing, best price evaluation, relationship restructuring, product specification improvements, joint process improvements, etc.

Key Elements of AECL's Strategic Sourcing Process

5. Supplier negotiations and contracting: Develop negotiation strategies/targets; Define team roles and responsibilities; Prepare for negotiations; Conduct negotiations; Execute contracts
6. Ongoing supplier relationship management: Execute purchase orders; Manage contract; Develop supplier scorecards; Map supplier performance to customer satisfaction; refine approach based on feedback.
7. Supplier selection and evaluation: Generate RFP's; Evaluate supplier proposals (price, service, etc.); Conduct supplier conference

AECL Strategic Sourcing is a Rigorous Methodology



AISQD and ASL (AECL Integrated Supplier Qualification Database)

- Oracle based software, since 2000
- Current and historical supplier qualification data
- ~ 3,000 suppliers (total database)
- **600** currently qualified to bid (includes Chalk River)



Supplier Selection Process



Suppliers – Are you
CANDU[®] Qualified?

 AECL EACL

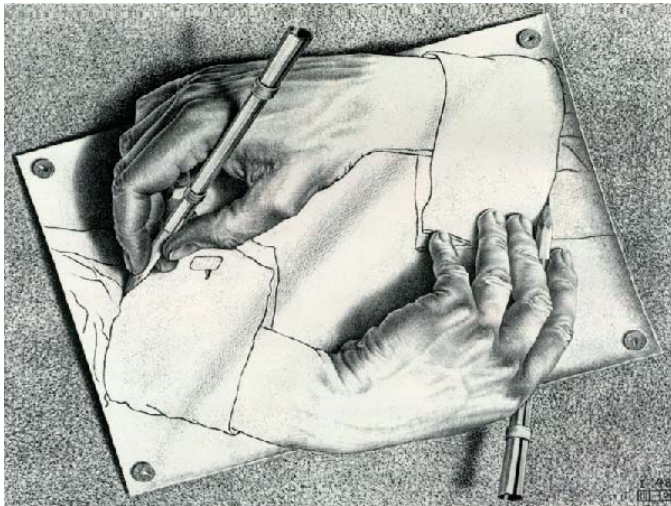
 AECL EACL

Going Forward

- Complete supplier qualifications for key components
- Revisit qualification status of entire Supply Chain, including all sub-contractors
- Ensure adequate training programs in place for required skills (e.g.; welding)
- Review and enhance NCR process and procedures
- **Strengthen GLOBAL supply chain**

Supplier Information Exchange

1. Any exchange of technical information (e.g. drawings/specs) requires proper authorizations from DFAIT/CNSC
(NDA's and Export Permits must be in place)
2. Supplier Perspective (2 key points):
 - a) What differentiates you from your competition ?
 - b) What products and services do you feel are of interest to AECL ?



Summary

- Stronger “Supply Chain” focus and org structure
- Dedicated VP Supply Chain in AECL Commercial Operations
- Keen interest nationally and overseas to obtain and maintain qualification
- We have 5 key major projects since Qinshan, China:
 - Bruce 1 and 2 restart (Ontario)
 - Cernavoda 2 (Romania)
 - Pt Lepreau (New Brunswick)
 - Wolsong 1 (Korea)
 - G2 (Hydro Quebec)



Supplier Qualification & Quality Monitoring (Major CANDU Equipment)



Supplier Qualification (New Suppliers)

Assessment of Suppliers:

1. QA Program Implementation
2. Design, Manufacturing, Fabrication, Inspection, Testing, Handling & Shipping Capabilities
3. Product Qualifications
 - Prototype Qualification, as required
 - Pre-production Qualification, as required



QA Program

- AECL verifies that the QA Programs are in compliance with the required Codes & Standards:
 - ISO 9001
 - ASME NCA-4000 (applicable N-stamp or Canadian CSA N285.0 certification)
 - ASME NCA-3800 for Material Organizations (Quality Systems Certificate (QSC) or Canadian CSA N285.0 certification)
- Assessment is carried out:
 - Review of the supplier's current certificates
 - QA Manual review and audit
 - Initial Capability Survey
 - Quality Program Audit

Initial Capability Survey

Areas Assessed:

- Plant size, layout & location
- Staffing levels & Personnel Qualifications
- Current product lines & specialty
- Design capabilities
- Manufacturing capabilities

Initial Capability Survey (continued)

- Evaluation of Design Engineering capabilities
- Inspection and Test Capabilities
- Clean Room, where required
- Major Subcontractor(s) where Nuclear material is required for ASME materials
- Packaging, Handling, Storage and Shipping capabilities
- Commercial & financial data

Initial Capability Survey (continued)

Assessment Process:

- Visit supplier facilities by a team of AECL specialists comprising of engineering and QA
- Request and review of initial data
- Capability Survey Checklist

Product Qualifications

(subject to specific equipment)

Prototype Qualification:

To confirm the acceptability of the suppliers manufacturing, inspection and test processes to satisfy product design and performance criteria

Pre-production Qualification:

To confirm that final established and accepted processes are under control and are capable of consistently producing products that meet specification requirements

Product Qualification (Continued)

Product Qualifications are Performed:

- Shop evaluations and acceptance tests
- Laboratory evaluation and tests
- Prototype qualifications are typically destructive and are performed prior to an award of a Purchase Contract
- Pre-production qualifications are a combination of destructive and non-destructive testing and are performed after the Purchase Contract award
- Product qualifications are product specific

Qualification Status / Stages

Qualified to Bid :

Initial Quality Program and capability review, but design and manufacturing capability not fully demonstrated - areas of improvement identified

Qualified to Award :

Demonstrated full design and manufacturing capability under an acceptable QA Program

Post Award Quality Monitoring

Post Award Scope:

Equipment / Procurement Engineering:

- Provide certified design specifications and documents
- Reviews supplier's design and manufacturing documents and procedures
- Provide technical requirements
- Accept manufacturing deviations (DDRs)

Quality Engineering:

- Coordinate Quality Audits
- Review supplier's Inspection & Test Plans (ITPs) and procedures

Post Award Quality Monitoring

Quality Surveillance:

- Monitor supplier's manufacturing, inspection & test operations
- Witness Tests
- Verify inspection & test reports
- Monitor QA Program implementation
- Monitor non-conformances
- Routinely report on quality performance
- Performs Final inspections
- Accepts and releases products
- Review, accept, and release permanent quality records



Success Factors

- Availability and proper implementation of related processes and capabilities / control of all design and manufacturing steps
- Use of qualified / established sub-contractors and material manufacturers
- Availability of time and resources to perform prototype qualification, as required
- The use of qualified personnel



Further Information

1) www.aecl.ca



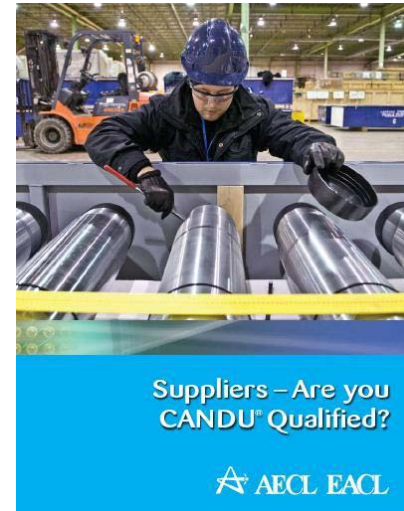
Supply Chain



Questionnaire

2) **Suppliers –**

Are You CANDU Qualified ?



3) **Contacts:**

Tracy Greig
VP, Supply Chain
greigt@aecl.ca

Peter Dalton
Director, Strategic Sourcing
daltonp@aecl.ca



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Questions



THANK YOU

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