



Introduction to Kinectrics

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June 23, 2020

Kinectrics Company Overview

**KINETRICS IS AN
INTEGRATED LIFE CYCLE
MANAGEMENT SERVICES FIRM.**

We deliver **sustainable & innovative** solutions to the toughest problems facing the electricity industry.

Driven by

PEOPLE 1100+ highly technical staff

FACILITIES Over 30+ unique laboratories

CUSTOMER Relationships, **4.7/5** Satisfaction Rating

Focused on serving distinct
GLOBAL markets:

**NUCLEAR
+ T&D**

70+

Complete range
of services across:

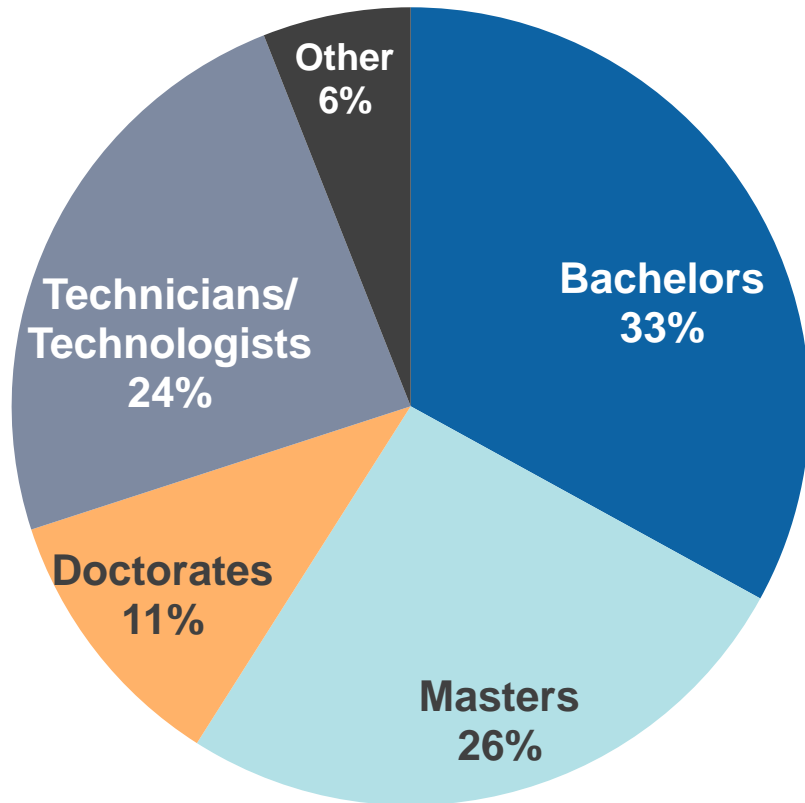
Engineering
Testing & Certification
Inspection & Analysis
Consultancy
Project Management
Contract R&D

110+
YEARS
EXPERIENCE

“No task is so important that we can’t make the effort to do it safely”

Renowned Technical Experts

Culture of hiring and retaining the best people



- 1,100+ of the best people
- 700+ with technical, science or engineering degrees
- 24/7 service
- Leaders at technical conferences & international standards committees

Multi-disciplinary teams offering full-service solutions:

- | | |
|--------------|-------------------|
| ✓ Electrical | ✓ Instrumentation |
| ✓ Mechanical | ✓ Control |
| ✓ Civil | ✓ Systems |
| ✓ Chemical | ✓ Analysis |
| ✓ Materials | ✓ Physics |

Unparalleled Facilities & Equipment



Over 30 state-of-the-art laboratories and 400,000 sq. ft of operational facilities



Kipling Campus

- Analytical Chemistry
- Metallurgical
- Alpha Dosimetry
- Irradiated Materials
- Tritium
- Radiochemistry
- Decontamination
- Seismic & LOCA
- Corrosion
- Burst
- RTDS
- Vibrational
- Fuel Channels
- High Voltage
- High Current
- Rotating Machines
- LV/MV/HV Cables
- Smart Grid
- Machining & Prototyping



KI North



Teeswater, ON



Downtown Toronto



Naperville, IL



United Kingdom

Global Operations

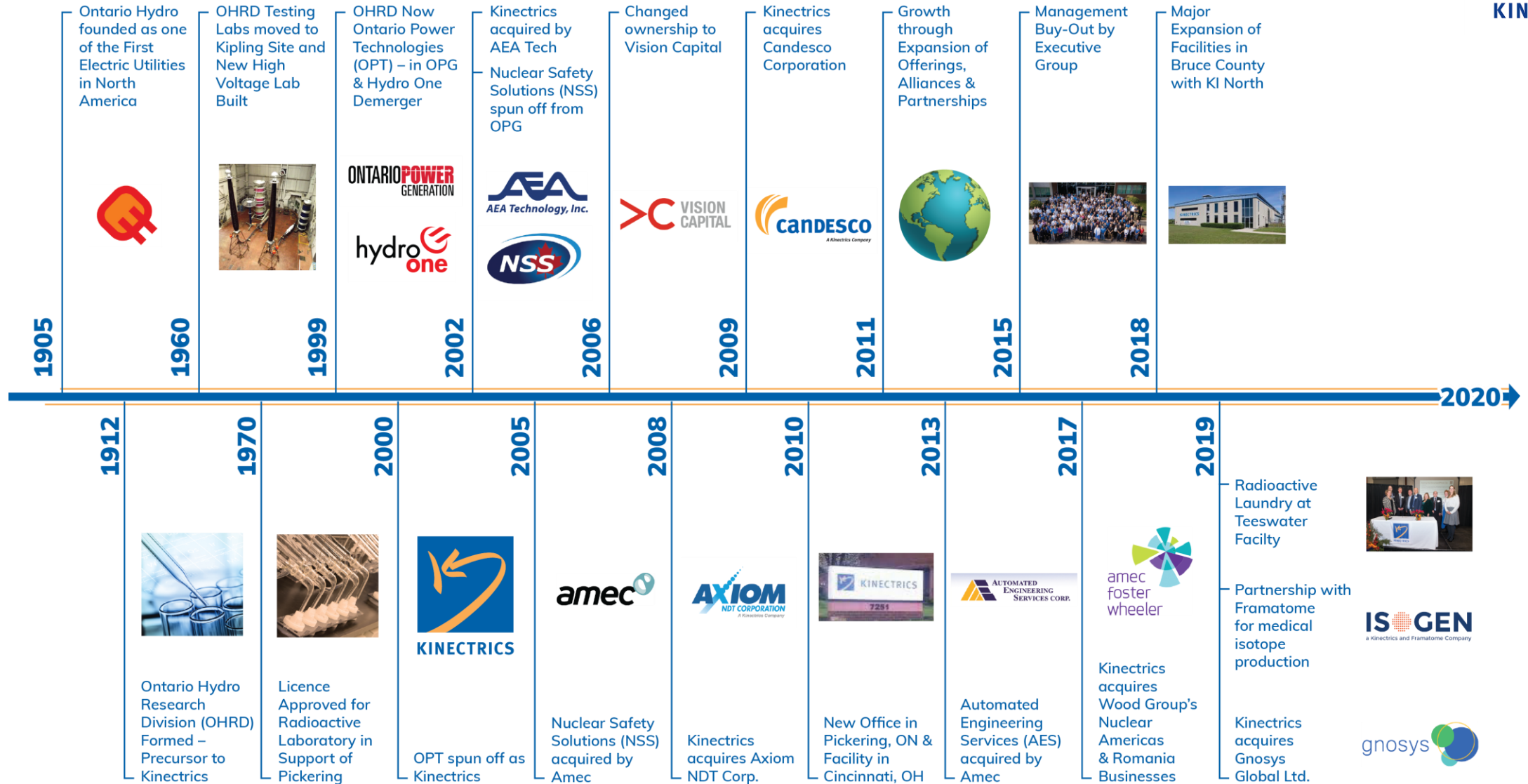


High Customer Satisfaction



- Kinectrics' Average Customer Satisfaction rating is 4.7 (Excellent =5 Good =4)

History of Growth



Giving Back

Kinectrics is committed to giving back to our community



- Over \$128,000 raised in 2019
- Nearly \$2M raised to date



- Over \$12,500 donated
- Volunteering
- Holiday food & toy drives



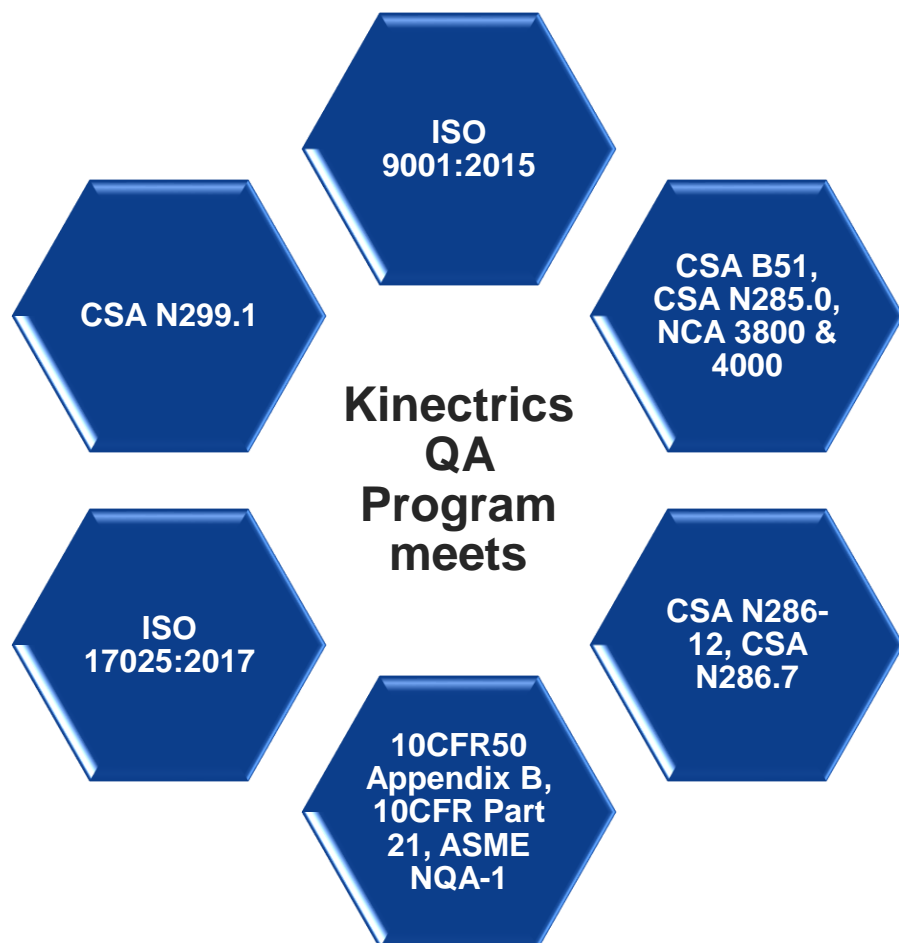
— A proud member of —



- Proud member since 2015
- PAR Committed certification



Delivering the Highest Quality

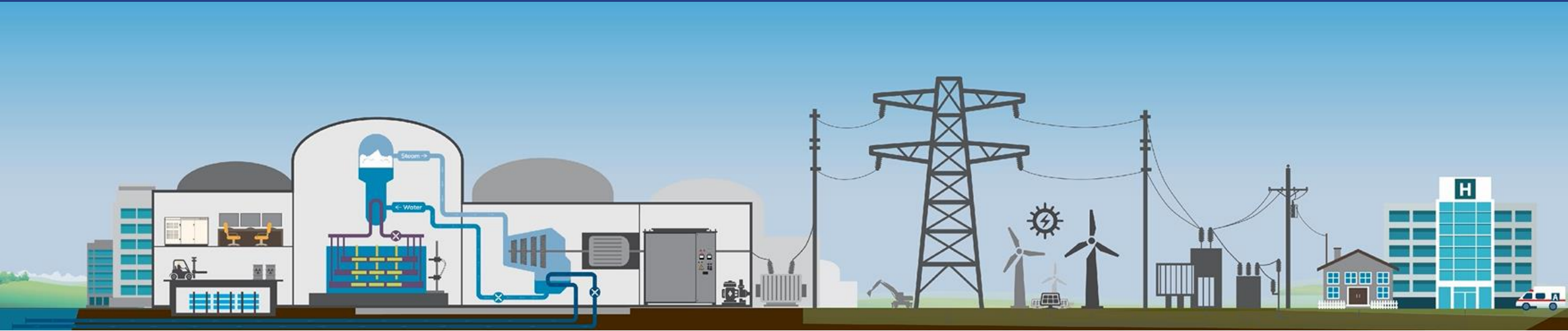


- Audited by customers & industry groups such as CANPAC, NUPIC & NIAC
- CSA B51 & CSA N285 certificates of authorisation
- ISO 17025 Accreditation
- ISO 9001 Certification

Integrated Life Cycle Management Solutions



From Generation to Customer across the Electricity Industry



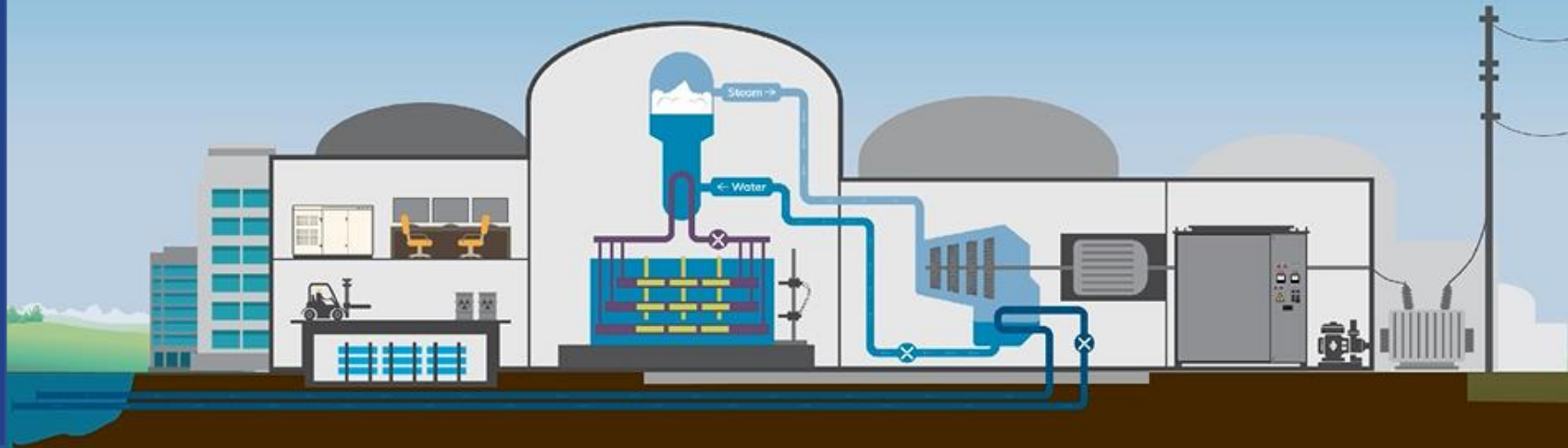
Nuclear Power
Generation

Transmission &
Distribution

End
Users

Nuclear

Life Cycle Management



Interactive
Animation ►

1. Consulting
2. Design & Station Engineering
3. Safety Related & Shutdown
4. Waste & Used Fuel Management
5. Containment
6. Steam Generator
7. Reactor Core
8. Fuel Channel Surveillance
9. Tooling & Outage Services
10. Steam Turbine
11. Intake/Discharge
12. Balance of Plant
13. Radioactive Laundry
14. Decommissioning

T&D

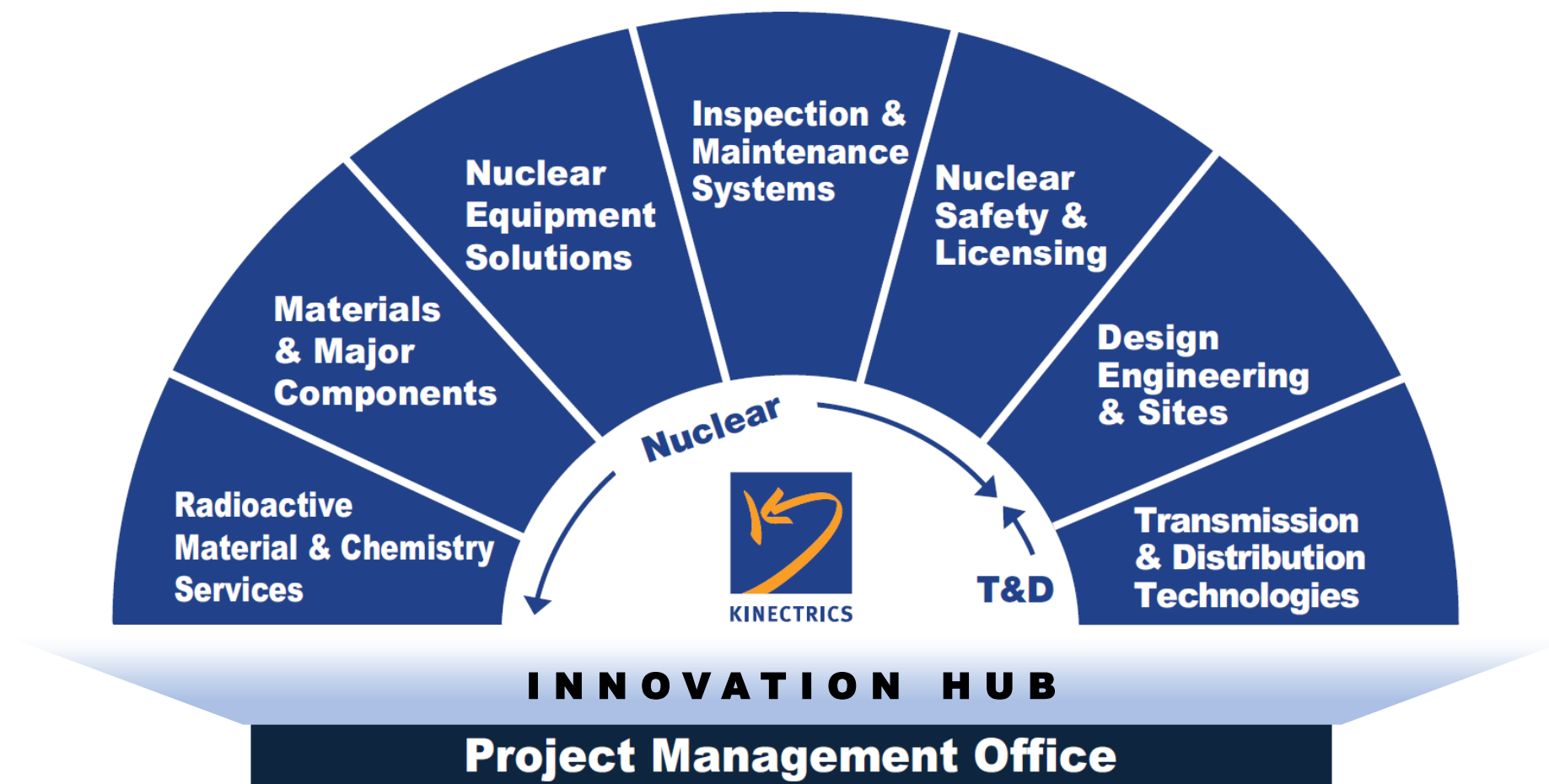
Life Cycle Management



T&D
Animation ▶

1. Generator & Motor Services
2. Protection & Control Generation Substation
3. Power Transformer
4. Substation
5. LineVue® & Safety Testing
6. High Voltage Underground Cables
7. Renewables
8. Energy Storage
9. Medium & Low Voltage Cables
10. Aerial Devices and Live Line Tools in the Field
11. Smart Metering
12. Asset Management
13. Arc Hazard & PPE

7 Technology Platforms supported by Innovation Hub & Project Management Office



Radioactive Material & Chemistry Services

Comprehensive Radioactive Materials Management ensuring complete care and control of nuclear substances throughout their life cycle



- Medical Isotopes production and development
- Nuclear waste management & disposal solutions
- Tritium and Fusion technologies
- Radioactive Facilities; Design, Build, and Operate
- Analytical chemistry laboratory; Station, Field and Environmental testing programs
- Materials characterization
- Stack monitor testing and qualification
- Activity transport monitoring and management
- Radiation Protection and Health Physics
- Radioactive PPE laundering facilities

Materials & Major Components

Life Cycle Management Services and methodologies for Nuclear Plant Components with world-renowned expertise and facilities



- Life cycle management - Fuel Channels, Feeders, Steam Generators, Piping, Exchangers, Reactor
- Cable and Polymer Expertise
- Failure Analysis
- Materials Solutions (Run, Repair, Replace)
- Aging management of Containment Structures
- Warm Cells, Irradiated Material Testing
- Bunkered Burst Testing
- Corrosion Assessment & Testing

Nuclear Equipment Solutions

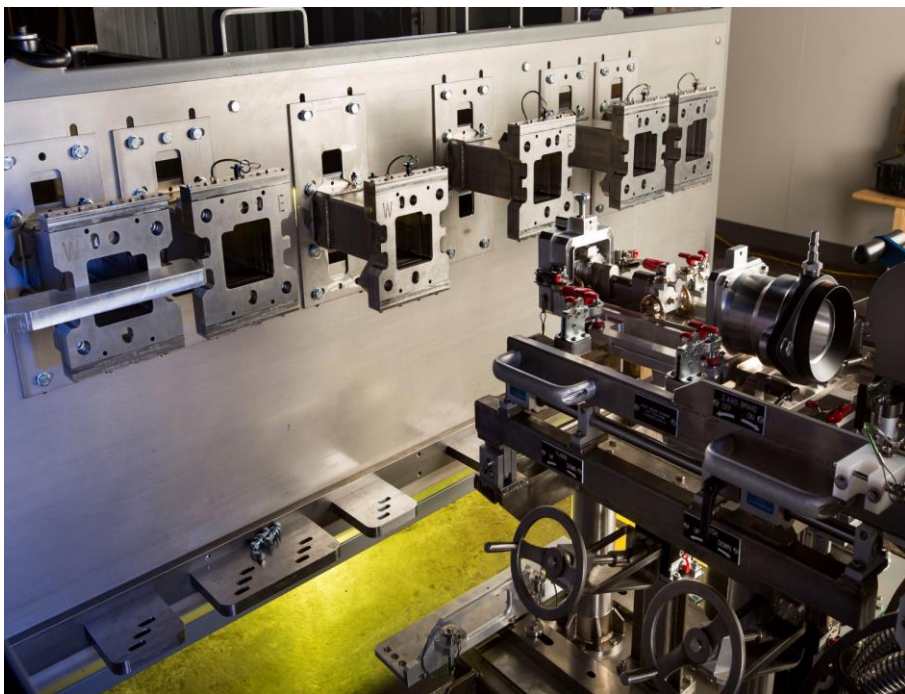
Proven parts supply expertise, delivering enhanced value through supply chain optimization



- Commercial Grade Dedication
- Solving obsolescence issues by Reverse Engineering
- Pressure Boundary Class 1,2,3 & 6
- Breaker Refurbishment and Motor Rewind
- Environmental Qualification
- Seismic and Random Input Motion Testing
- Skid system design and development
- In-house machining capability

Inspection & Maintenance Systems

CANDUs leading Fuel Channel Inspection company offering complete design-build-deployment capabilities



- Major OEM of CANDU Fuel Channel inspection suite: CWEST, ANDE, SLAR
- Rapid Design, Tooling & Deployment for CANDU Issues
- Station Qualified Fuel Channel Deployment Teams
- Licenced CNSC radioactive Maintenance
- In-house machining capability
- Complete mock-up and zoned facilities

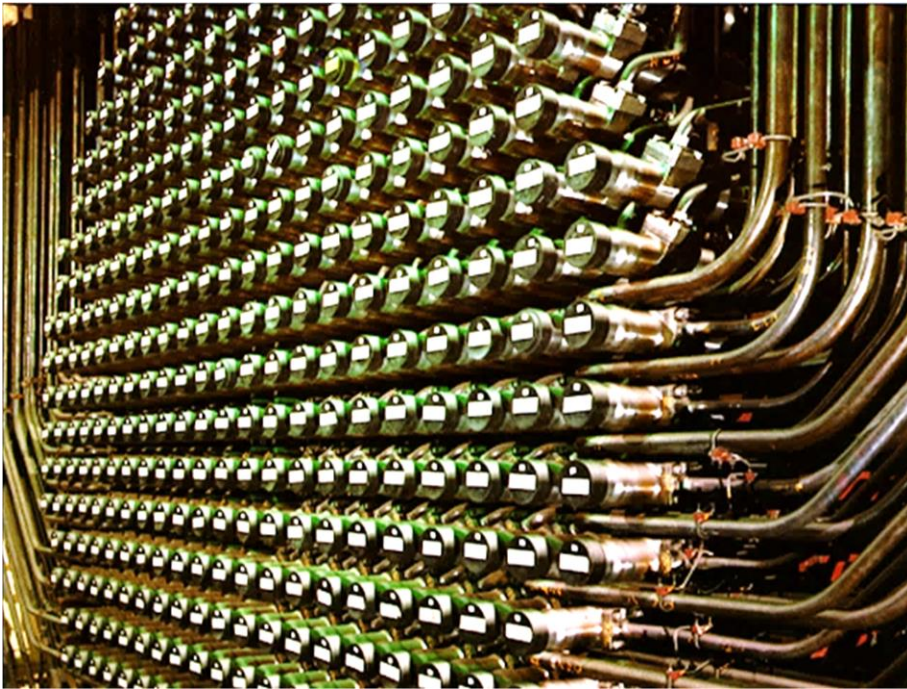
FCI Tools
Video ▶

KI North
Video ▶

CRD
Video ▶

Nuclear Safety & Licensing

Providing the CANDU Industry and SMR vendors with a center of excellence for Nuclear Safety Analysis & Licensing



- Operational assessments & fuel performance
- Full lifecycle deterministic and probabilistic safety analysis & assessments
- Nuclear Regulatory Affairs & Licensing
- Risk informed assessments, reliability & equipment performance
- Accident management, security and emergency response
- Computer Code Development & Maintenance

Design Engineering & Sites

Leading supplier of Nuclear Plant Engineering services covering all disciplines and demonstrably providing the lowest cost of ownership



- Mechanical and Civil Engineering
- Electrical and Instrumentation & Controls Engineering
- Piping and Pressure Boundary Design
- Specialty Engineering and Analysis Services
- On-site support & Field Team Lead Services
- Owner's Engineering and oversight
- Project Controls & Program Planning

Transmission & Distribution Technologies

Providing testing and asset management services allowing reliable condition assessment and predictable life extension of assets



GridSim
Video ▶

LineVue
Video ▶

HV Cables
Video ▶

Asset Mgmt
Video ▶



- Laboratory Testing: high voltage, high current, grid simulation, safety equipment, generators and motors
- Mobile Field Testing: Cables, substations, transformers, power equipment, grounding
- LineVue® automated conductor inspection and assessment
- ArcPro® arc hazard analysis software
- Asset management Consulting
- Self-Healing Fluid Filled Cables
- Industrial Innovation Accelerator

Project Management Office

Value-added Project Management Infrastructure that allows the company to achieve the best predictable outcomes for its more complex projects



- Resource Management
- Schedule Adherence & Look ahead
- Commitment Adherence & Look ahead
- 10 Year Budget Plans with Integrated Resource Histograms
- Predictable Cashflow Forecast
- Earned Value Analysis
- Risk Analysis
- Project Planning & Coordination
- Data Analytics and Dashboards using PowerBI and QlikView

Innovation Hub

Responding to customer challenges through innovative solutions and embracing technological advancements



- Company-wide ideation program, building a culture of innovation
- Systematic approach to ideation, incubation, and commercialization
- Partnerships with academia, incubators, and other institutions
- Adoption of technology to increase productivity, human performance, and improve quality
- Focused on digitization and smart, connected products & services

Cross-Platform Collaboration

Integrated solutions for the toughest problems facing the electricity industry



Collaboration Highlights:

- **Medical Isotopes - ISOGEN™**
 - Radioactive Materials & Chemistry
 - Safety & Licensing
 - Design Engineering
 - Project Management
 - Innovation
- **Radioactive Laundry**
 - Radioactive Materials & Chemistry
 - Design Engineering
 - Project Management
 - Safety & Licensing
 - Innovation

Responding to COVID-19



Recognizing Canadian Needs

- Kinectrics provided aid to Canadian frontline workers, including medical staff in the fight against COVID-19; leveraging our capabilities, equipment, facilities
- Established medical PPE testing for surgical masks and NIOSH-type respirators
 - ASTM F2100 series testing
 - 42 CFR Part 84
- Positions Kinectrics as the **only** lab in Canada with capability to test all medical respiratory PPE



Re-tooling to **fight COVID-19** and **rebuild the economy**





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