

# ROBERT J. MACDONALD

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## PROFESSIONAL EXPERIENCE

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February 2008 - Present

*Location: Romoland, California*

*IEEC 7H Project*

*Plant Configuration: 2 GE 7H STAG Turbines*

*Electrical Commissioning Engineer: Performed typical electrical commissioning tasks such as MV/LV motor commissioning, Switchgear commissioning and function testing, motor operated valve commissioning, construction supervision.*

March 2008 – February 2008

The Fitch Company

*Location: Bangor, Maine*

*Pinetree Landfill – Gas to Energy*

*Plant Configuration: 3 GE-Jenbacher Methane Engines / 3 MW*

*Commissioning Engineer, Start-Up Coordinator: Acted as liaison between engineering, vendor commissioning groups, Cianbro commissioning groups and Cianbro Constructors for installation & commissioning of the 3 unit methane facility for Casella Waste Systems.*

*Location: Domtar Woodland*

*#9 Boiler Ash Handling Upgrade*

*Controls Engineer: Completed the electrical engineering upgrade to the #9*

*Boiler Ash Handling System including instrument specification, control panel design, routing, cable specification*

*Location: Mansfield Massachusetts*

*Quality Engineer: Performed hardware acceptance testing for Lonza Biologics for 60 + complex instrument control panels. Enforced installation specifications, implemented GMP (Good Manufacturing Practices policies) as a contractor for New England Controls*

March 2007 – June 2007

SNC Lavalin Constructors

*Location: Toronto, Ontario*

*Portlands Generating Station*

*Plant Configuration: Biomass, 875 MW Combined Cycle / Simple Cycle*

*Electrical Commissioning Engineer – Start-Up Division*

October 2006 – March 2007

SNC Lavalin Constructors

*Location: Benson, Minnesota*

*Fibrominn Biomass Power Project*

*Plant Configuration: Biomass, 60 MW, Fuji Steam Turbine, Turkey Litter*

*Electrical Commissioning Engineer – Start-Up Division*

January 2006 – October 2006                      SNC Lavalin Constructors  
*Location: Becancour, Quebec*                      *Becancour Cogeneration Project*  
*Plant Configuration: Cogeneration/Combined Cycle, 550 MW, Natural Gas*  
*Electrical Commissioning Engineer – Start-Up Division*

June 2005 – January 2006                      SNC Lavalin Constructors  
*Location: Toronto, Ontario*                      *Greater Toronto Airport Authority*  
*Plant Configuration: Cogeneration/Combined Cycle, 117 MW, Natural Gas*  
*Electrical Commissioning Engineer – Start-Up Division*

January 2002 – April 2003                      SNC Lavalin Constructors  
*Location: El Dorado, Arkansas*                      *Panda Power Project*  
*Plant Configuration: Combined Cycle, 2,250 MW, Natural Gas*  
*Electrical Commissioning Engineer – Start-Up Division*

- High Voltage commissioning
- Medium Voltage commissioning
- Low Voltage commissioning
- Balance of Plant commissioning
- Operations
- CT, PT, Transformer Testing
- HV & MV protection scheme function testing
- Proficient in reading HV, MV, and LV control prints
- Engineering interface, design change and field reporting
- DC Motor Commissioning
- UPS Commissioning
- MV & LV Drives & Motor Commissioning
- Device Net & Foundation Field Bus communications protocol and commissioning
- Standby diesel generator protection and unit commissioning
- Hardware Factory Acceptance Testing (FAT) for electrical control systems
- Associate member of National Electrical Testing Association (NETA)
- Standards & Specification Driven

April 2004-June 2005                      Millennium Power Services, Westfield MA  
*Founder- Instrumentation and Controls Division*

- Responsible for the implementation and business development of an Instrumentation & Controls division within Millennium Power Services
- Responsible for document development for new client calibrations.
- Cost estimating and job engineering for multi-process applications of field devices to include instrumentation and electrical equipment.
- Responsible for hiring and managing new division of I&C technicians for jobs over the east coast.
- Responsible for sales growth in first year of operations exceeding \$700,000

May 2003-March 2004                      Honeywell, Westbrook ME  
*Team Lead- Honeywell Westbrook, Maine*

- Responsible for directing team of ten technicians across Southern Maine and New Hampshire.
- Maintained and Audited Honeywell HVAC Contracts totaling 6 million annually
- Increased effectiveness of new contracts by incorporating newly commissioned facilities punch lists that were previously missed on many contracts thereby reducing cost associated with of maintenance for newly installed equipment.
- Increase team performance through standardizing expectations of craft licensing.
- Played active hands on role for engineering and creating new job estimates while encouraging autonomy of sales at the technician level.

January 2002- April 2003

SNC – Lavalin Constructors (NEPCO)

*Electrical Commissioning Engineer- Start-Up Division*

- Dielectric testing of industrial transformers, generators, medium and low voltage AC & DC motors. MV & LV switch gear and HV/MV/LV power cables.
- Industrial Generator and Transformer unit protection and lock out protection including reverse energization, transformer unit protection (Buchholz relay, sudden pressure, winding temperature), distance/out of step, over current, under voltage, and differential voltage circuit testing and functional operation testing.
- Directed Owner, Utility and contractor official witnessing of unit first synchronization and system coordination.
- GE Mark V control system electrical commissioning to include communication to and from Mark V such as; unit trip from switchyard, breaker status, AC/DC motor runs & status, overloads trips, and lead lag control schemes, fire protection relay testing & communication.
- Performed system walk downs & inspections to included GE 7FA turbine, generator, transformer, and balance of plant equipment readiness for start up operations.

Summer 2001

NEPCO

Bothell, Washington

*Cooperative Start-Up Engineer*

- Performed safe electrical commissioning on approximately 100 pump/motor combinations in a 3-month period.
- Performed short circuit test on industrial generator step up transformer while assisting third party test group verification protection instrument transformers, synchronization potential transformers and verification to transformer turns ratio (TTR).
- Performed Hi-Pot testing of Generator breaker, power feed cables and switchgear.
- Performed Polarization Index electrical testing of GE steam and gas turbine generators on monthly schedule for quality assurance
- Executed duties of Turn Over Coordinator, promoted to electrical commissioning crew.
- Performed mathematical analysis of short circuit testing and provided as a report to satisfy academic requirement as part of cooperative education requirements.

Summer 2000

Eastern Paper Co. Brewer, Maine

*Cooperative Engineer*

- Performed High Pressure Boiler Inspection with National Board of Boiler and Pressure Vessel Inspector during annual shut down.
- Installed on demand chemical feed system for fire and waterside boiler treatment, including integrated tubing and supports, chemical containment and system construction to include chemical site consolidation, integrated day tank and metering pump supports.
- Converted lotus plant logging to Microsoft Excel application for daily logs and management reports for power plant management recording.
- Responsible for Environmental Outfall of mill to include pH, temperature and weir calculations of flow to maintain outfall records while ensuring EPA standards.
- Performed boroscope inspections of boiler high pressure steam drum risers and downcomers for chemical analysis such as scaling, pitting and phosphate hideout.
- OSHA specified training for mill wide requirements such as Lock out Tag out training.

Summer 1999

Penobscot Hydro, LLC. Milford, Maine

*Intern Engineer*

- Hydro turbine maintenance.
- Welding
- Participated in 15-ton transformer replacement.
- Large equipment operations

1996-1997 Bowen Machine & Fabrication. Morenci, Arizona

*Electricians Assistant*

- Assisted several aspects of electrical installations at Phelps Dodge Mine, Morenci, AZ.
- Individually selected for electrician journeyman program.

EDUCATION

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12/2001	Maine Maritime Academy	Castine, Maine
	<i>B.S. Power Engineering Technology</i>	
6/1991	<i>Bangor High School</i>	<i>Bangor, Maine</i>

SKILLS

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Software:

MS Win 95,98, ME, 00, XP

MS Office Suite

MS Access Database

MS Visual Basic

MS Project

Quick Basic

AutoCAD & CAD Key

Math CAD

Leadership:

4 yrs honorable service in USMC

High business/time management skills

Associate Member of NETA