



National Research Council
Canada

Conseil national de recherches
Canada

WIND ENERGY PROGRAM ELEMENTS

- (HISTORICAL)
- NRC RE-INVENTION OF DARRIEUS VERTICAL AXIS WIND TURBINE (1966)
 - EARLY WIND TUNNEL TESTS TO PROVE CONCEPT (1966-1971)
 - PATENT APPLICATION REFUSED (1967)
 - FIRST SMALL GRID-COUPLED TEST (1973)
 - NRC WIND ENERGY ACTIVITY INTEGRATED INTO PERD PROGRAM STRUCTURE (1974)
 - NRC DECISION TO PROCEED WITH MAGDALEN ISLAND RESEARCH VAWT (1975)

ANALYSES

- PERFORMANCE PREDICTION
- STRESS AND FATIGUE
- ENERGY CAPTURE
- VALUE OF CONTRIBUTION TO A GIVEN GRID

EXPERIMENTS

- AERODYNAMIC RESEARCH ON BLADES AND ROTORS
- AEROELASTIC MODELLING AND TESTING
- PERFORMANCE CALIBRATIONS OF SMALL COMMERCIAL WIND TURBINES
- CALIBRATION OF ANEMOMETERS AND OTHER INSTRUMENTS

FIELD TESTS

- SIX STAND-ALONE SYSTEMS (SPECIAL APPLICATIONS)
- 10 KW AND 100 KW WIND/DIESEL HYBRIDS
- FOUR 50 KW GRID COUPLED UNITS (REMOTE COMMUNITY APPLICATIONS)
- ONE 230 KW GRID COUPLED UNIT (GRID-SCALE ENERGY SUPPLIES)