CANADIAN INDUSTRY-UNIVERSITY COOPERATION IN NUCLEAR WASTE MANAGEMENT

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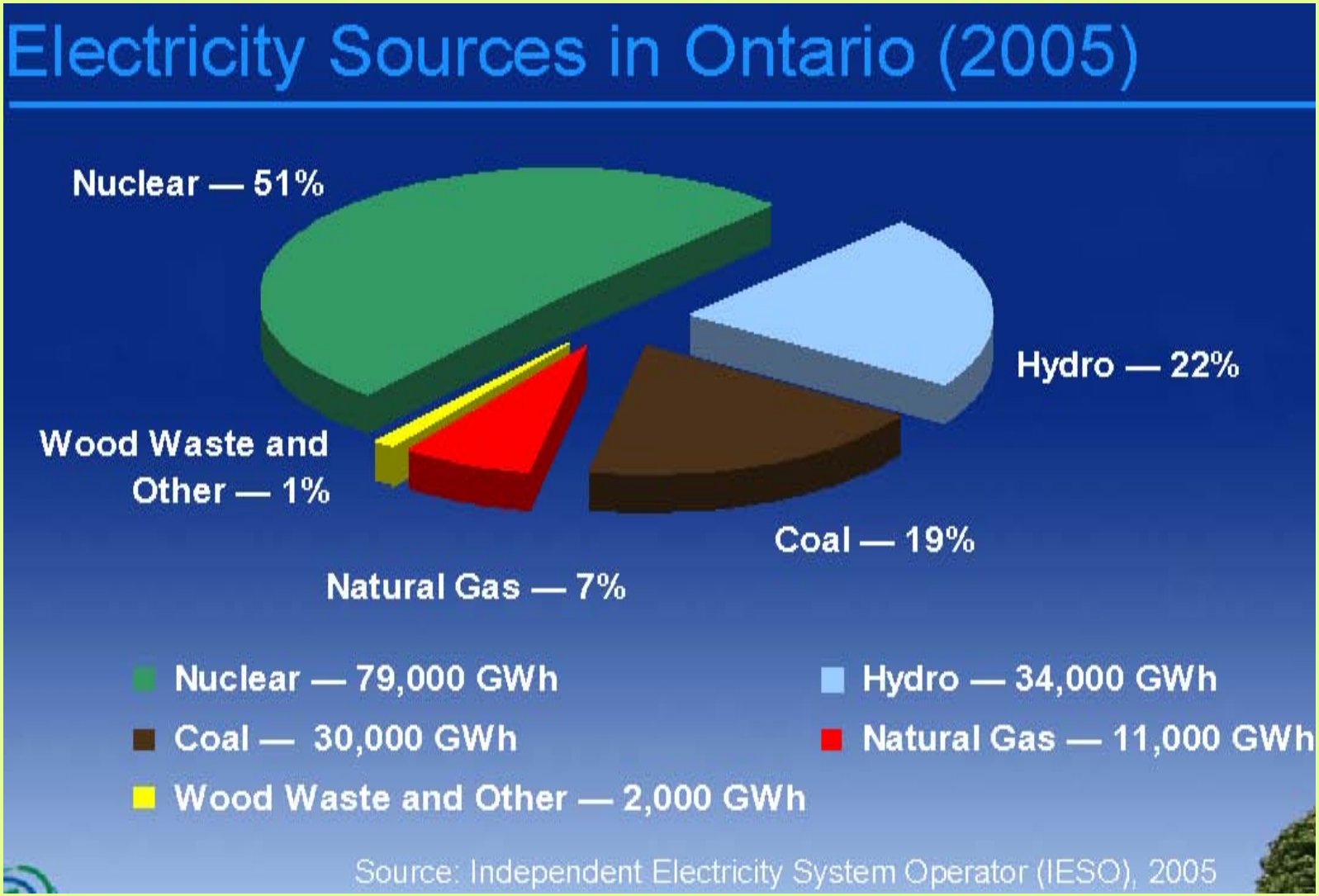
Wide range of employment opportunities in Canada's nuclear industry

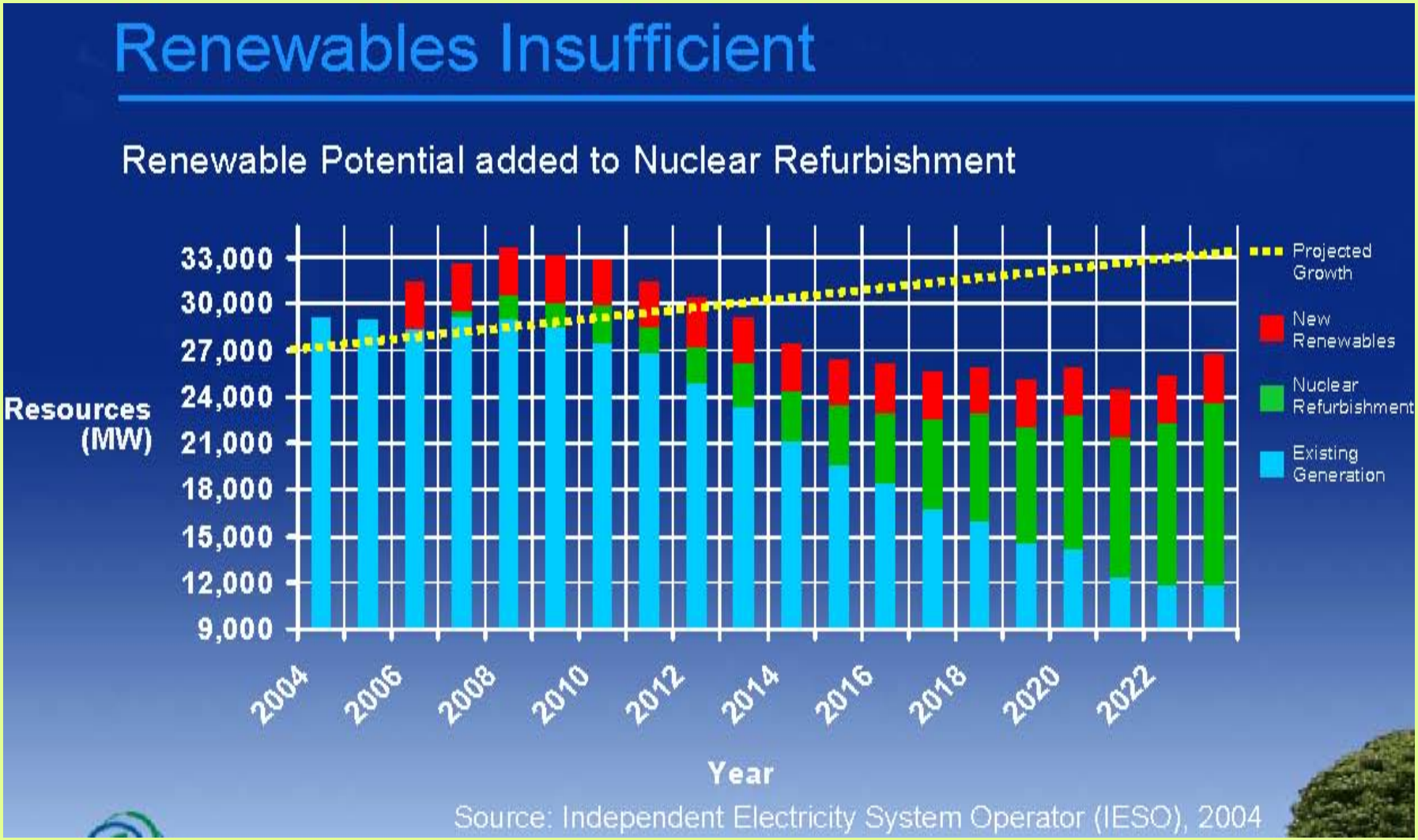
STATION	UNITS MW (gross)	YEAR IN-SERVICE
Pickering A	4 x 540	1971-73
Bruce A	4 x 805	1977-79
Pickering B	4 x 540	1983-86
Bruce B	4 x 840	1984-87
Darlington	4 x 935	1990-93

Management of nuclear waste in Ontario

The current role of nuclear generation in Ontario



The future of nuclear generation in Ontario



Industry-University Partnerships

- In-house training programs at major nuclear utilities
- Community Colleges – expanded skills training for construction, maintenance and operating personnel
- CANTEACH – an open CANDU document archive (2001)
- UNENE – a University Network of Excellence in Nuclear Engineering (2002)
- UOIT – established by an act of the Ontario Legislature with the mandate to meet market needs for graduates (2002)

CANTEACH

- To preserve technical knowledge of CANDU nuclear-electric generating systems for use by present and future members of the CANDU community
- To provide educational and training material for use by students and practitioners
- Aimed at capturing and disseminating know-how and know-why
- The program is supported by industry via the CANDU Owners Group (COG membership includes AECL, and Canadian, Korean, Chinese, Indian, Pakistani, Romanian, and Argentinian nuclear utilities)

UNENE

- University Network of Excellence in Nuclear Engineering
- An industry driven alliance of prominent Canadian universities and nuclear companies
- Created to assure a dependable supply of masters and doctorate level graduates with research expertise
- Offers a course-based master of nuclear engineering program to upgrade the educational levels of people in the industry
- Funding a group of respected, university-based, nuclear science and engineering experts for public and industry consultation
- Reinvigorate university-based research and development in nuclear technology, focusing primarily on mid to long term research

The University of Ontario Institute of Technology opened in 2003, and currently has 4,300 undergraduate students

Nuclear Degree Programs offered

- Bachelor of Nuclear Engineering (B.Eng., four years)
- Bachelor of Nuclear Engineering and Management (B.Eng. & Mgt., five years)
- Bachelor of Health Physics and Radiation Science (B.Sc., four years)
- Bachelor of Applied Science in Nuclear Power (B.A.Sc., four years)
- Current enrollment: > 200 students
- Courses include:
  - Nuclear Plant Operation
  - Environmental Effects of Radiation
  - Corrosion for Engineers
  - Radioactive Waste Management Design
  - Nuclear Fuel Cycle

Results of the efforts of the last five years

- CANTEACH website (http://canteach.candu.org) has over 1,500 documents in the database
- UNENE has established:
  - 13 research-chairs and related faculty positions at 6 universities
  - 26 full-time masters and doctorate students are doing nuclear-related research
  - over 30 people from industry are enrolled in the course-based M.Eng. program
- UOIT has over 200 undergraduate students in nuclear engineering, health physics and radiation science programs
- First UOIT nuclear program graduates in May 2007
- M.A.Sc. and M.Eng. in Nuclear Engineering are planned to commence in the 2007-08 academic year

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