

## NUCLEAR ENERGY FACTS:

Canada is the world's leading exporter of uranium, producing over one third of the world's uranium mine output

In 1987, the CANDU reactor, along with the CN Tower and the Alouette space satellite, was ranked as one of Canada's top ten engineering achievements during the previous 100 years

Heavy water (D<sub>2</sub>O) is 10% heavier than ordinary water and has a neutron moderating ratio 80 times higher than ordinary water

As of 2004, nuclear power provided 6.5% of the world's energy and 15.7% of the world's electricity, with the U.S., France, and Japan together accounting for 57% of nuclear generated electricity

Nuclear energy comes from mass-to-energy conversions that occur in the splitting of atoms. Albert Einstein's famous mathematical formula  $E = mc^2$  explains this. The equation says: E [energy] equals m [mass] times  $c^2$  [c stands for the speed or velocity of light]. This means that it is mass multiplied by the square of the velocity of light

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## CANADA & INDIA REACH AGREEMENT ON NUCLEAR TRADE

Canadian uranium and nuclear hardware may soon be shipping to India for the first time in nearly four decades after a deal reached during Stephen Harper's visit to New Delhi. Canada and India announced they've cleared a diplomatic logjam that prevented Canadians from selling nuclear material and technology to the energy-hungry south Asian country. The deal is a modest win for Prime Minister Harper who is spending six days touring India to convince New Delhi it should devote more effort to signing agreements that would expand trade and investment between the two countries.

It was two years ago that Canada and India reached a nuclear co-operation deal with great fanfare – one that was supposed to pave the way for a vast new export business for Canadian uranium and reactor companies. That breakthrough helped the two countries move past decades of awkward and sometimes chilly relations over India's misuse of nuclear fuel obtained from Canada in the 1970s. But the 2010 deal never came into force though because India balked at Canada's insistence that it should have the right to verify India's handling of any Canadian nuclear material. India already reports its activities to the International Atomic Energy Agency and didn't believe it should have to pass muster with Canada too.

The nuclear co-operation agreement will allow Canadian firms to export and import controlled nuclear materials, equipment and technology to and from India to facilities under safeguards applied by the International Atomic Energy Agency.

But it's also good business. A study commissioned by Canada and India concluded that free trade could boost Canada's annual economic output by at least \$6-billion. The Tories are also keen to diversify trade beyond Canada's heavy dependence on U.S. customers and is targeting rapidly emerging economies such as China, India and Brazil.

[Source: [www.theglobeandmail.com](http://www.theglobeandmail.com)]

## CHINA TO APPROVE NEW REACTORS BY 2015

China will approve a small number of new nuclear reactors before 2015 to be built only in coastal regions. The approval of new nuclear safety and development plans comes after a near 20-month ban by Beijing on approvals of new plants following the Fukushima disaster in Japan.

The latest plan could pave the way for Beijing to resume approvals, which would be a benefit to Chinese nuclear power equipment makers including Shanghai Electric Group Co. and Dongfang Electric Corp., whose long-term contracts have been frozen during the ban.

In a decision that could be good news for foreign reactor builders including France's Areva and U.S.-based Westinghouse, which is owned by Japan's Toshiba, China stipulated that new reactors would need to adhere to "third-generation" technology that meets the highest international safety standards. China's current fleet of nuclear reactors is mostly second-generation and is based on a variety of designs from Canada, France and Russia.

[Source: [www.reuters.com](http://www.reuters.com)]

## DARLINGTON POWER PLANT RECEIVES AWARD FOR SAFETY

The Darlington Nuclear Power Generation Station in Durham Region has been presented with an award for safety, operations and management. The Institute of Nuclear Power Operations said Darlington was given a distinction which is reserved for top-performing nuclear power stations around the world.

Energy Minister Chris Bentley said the award speaks to the Ontario Power Generation's strong leadership in lessons learned from Fukushima in Japan. The Darlington facility is in the municipality of Clarington and provides Ontario with approximately 20 per cent of its energy.

[Source: [www.680news.com](http://www.680news.com)]

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