

**W**ind power is one of the fastest growing sources of energy in the world. The wind power industry creates new jobs, offsets emissions from fossil fuel-fired power plants, and enhances security of electricity supply.

Wind power has also become a big business, generating billions of dollars in revenue every year. The leading wind energy industries of Germany, Spain, and Denmark already employ more than 70,000 people.

The wind power industry has experienced average annual growth rates of 20-35% from 1999 to 2004. In 2004, the amount of installed wind power around the world grew by 20% and reached a record 48 gigawatts (from only 5 gigawatts in 1995).

The cost of wind power has dropped dramatically during the past two decades. Wind technology costs have declined 12-18% each time global capacity has doubled. Wind-generated electricity costs have dropped from about 56 cents per kilowatt-hour (US) in 1980 to 4-7 cents per kilowatt-hour (US) today.

Germany and Spain have become world leaders in wind power thanks to strong political support. A key policy mechanism, known as advanced renewable tariffs (ARTs), has ensured the rapid growth of wind power in Germany and Spain and has helped foster strong manufacturing facilities.

ARTs eliminate two of the biggest obstacles inhibiting renewable energy development by improving the ability to connect to the grid, and by providing a guaranteed price for an extended period of time to warrant the financial risk of investment.

TOP 10 WIND POWER LEADERS	
COUNTRY	MEGAWATTS OF INSTALLED WIND POWER AS OF 2004
Germany	16,600
Spain	8,300
US	6,700
Denmark	3,100
India	3,000
Italy	1,100
Netherlands	1,100
UK	890
China	770
Austria	610

## Wind power in Canada

Canada's wind power potential is one of the best of the world and has been conservatively estimated at 30,000 Megawatts (MW). Canada also has large hydroelectric reservoirs that can be used as a back up when wind is intermittent to provide year-round reliable and clean electricity.

Although the Canadian wind market is still small, the installation of wind turbines grew 38% in 2004 (from 321 MW to 444 MW), and an additional 2,077 MW of wind power is in development. If Canada aggressively develops wind energy, it can attract wind turbine manufacturers and their suppliers to the country.

## Current Canadian wind energy legislation

Electricity generation is mostly under provincial jurisdiction. The federal government is involved in wind energy through support programs rather than legislation such as tax incentives, federal purchase of electricity, market incentives, and technology research and development.

Most provinces and territories have voluntary wind targets. However, legislated targets, known as Renewable Portfolio Standards (RPS), have been implemented in Prince Edward Island and in Nova Scotia.

PEI and Ontario are also considering implementing ARTs for community wind power initiatives.

Wind power is an attractive alternative to polluting coal-fired power plants in Ontario. For example, if Ontario replaces its coal facilities with a combination of renewable energy, energy efficiency and conservation the province could reduce its greenhouse gas emissions by 35 MT – the equivalent of taking all the automobiles and light-duty trucks off the road in Ontario.

WIND POWER IN CANADA	
	MEGAWATTS OF INSTALLED WIND POWER
Yukon	1
Ontario	15
Alberta	275
Quebec	212
Saskatchewan	22
PEI	14
Manitoba	20
Nova Scotia	32
Total	590



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