



China and India

Growing energy use

And environmental issues

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China and India are Asia's two largest emerging economies



- ❑ Both have large populations, industrializing economies and rising living standards and energy consumption.
- ❑ This slide show compares energy production, consumption and efficiency of both countries head-to-head and the environmental issues both are confronting as a result of their growing energy use.
- ❑ The numbers are drawn from official statistics, the Organization of Economic Cooperation and Development and the International Energy Agency and are the latest available full-year estimates.
- ❑ The energy intensity comparison is based on purchasing power parity conversion rates.





Total Energy Consumption

China:

59.6 quadrillion Btus:

- ❑ Coal (69%),
- ❑ Oil (22%),
- ❑ Hydroelectricity (6%),
- ❑ Natural Gas (3%),
- ❑ Nuclear (1%),
- ❑ Renewable (0%)

Per Capita Energy Consumption

China: 34.9 million Btus

India: 3.2 million Btus

India:

14 quadrillion Btus:

- ❑ Coal (52%),
- ❑ Oil (34%),
- ❑ Natural Gas (7%),
- ❑ Hydroelectricity (5%),
- ❑ Nuclear (1%),
- ❑ Renewable (0%)

Energy Intensity

China: 9,080.4 Btu per \$2,000 GDP

India: 4,825 Btu per \$2,000 GDP

Proven Oil Reserves

- **China:** 18.3 billion barrels
- **India:** 5.4 billion barrels

Oil Production

- **China:** 3,806.2 thousand barrels/day, of which 96% was crude oil.
- **India:** 838.9 thousand barrels/day, of which 76% was crude oil.

Crude Oil Distillation Capacity

- **China:** 6,246 thousand barrels/day
- **India:** 2,254.6 thousand barrels/day

Proven Natural Gas Reserves

- **China:** 53.3 trillion cubic feet
- **India:** 30.1 trillion cubic feet

Oil Consumption

- **China:** 6,899.6 thousand barrels/day
- **India:** 2,524.7 thousand barrels/day

Natural Gas Production

- **China:** 1.4 trillion cubic feet
- **India:** 1 trillion cubic feet



Recoverable Coal Reserves

- **China:** 126,214.7 million short tons
- **India:** 101,903.2 million short tons

Coal Production

- **China:** 2,156.4 million short tons
- **India:** 403.1 million short tons

Installed Electricity Capacity

- **China:** 391.4 giga watts
- **India:** 126.3 giga watts

Electricity Production

- **China:** 2,079.7 billion kilowatt hours
- **India:** 556.8 billion kilowatt hours

Electricity Consumption

- **China:** 1,927 billion kilowatt hours
- **India:** 519 billion kilowatt hours





Energy-Related Carbon Dioxide Emissions

- **China:** 3,541 million metric tons: Coal (81%), Oil (17%), Natural Gas (2%)
- **India:** 1,024.8 million metric tons: Coal (65%), Oil (30%), Natural Gas (5%)

Carbon Dioxide Intensity

China: 0.7 Metric tons per thousand \$2,000-PPP**

India: 0.4 Metric tons per thousand \$2,000-PPP**

Per-Capita Carbon Dioxide Emissions, Energy-Related

China: 2.7 metric tons

India: 1 metric tons



Environmental Issues

China:

Air pollution (sulfur dioxide particulates) from reliance on coal produces acid rain; water shortages, particularly in the north; water pollution from untreated wastes; deforestation; estimated loss of one-fifth of agricultural land since 1949 to soil erosion and economic development; desertification; trade in endangered species

India:

Deforestation; soil erosion; overgrazing; desertification; air pollution from industrial effluents and vehicle emissions; water pollution from raw sewage and runoff of agricultural pesticides; tap water is not potable throughout the country; huge and rapidly growing population is overstraining natural resources.



Major Environmental Agreements

China:

Party to:

Antarctic-Environmental Protocol, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling; signed, but not ratified: none of the selected agreements

India:

Party to:

Antarctic-Environmental Protocol, Antarctic Treaty, Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands and Whaling