EXUP INC

PRESENTS:

GREEN FACT SHEET COMPLETE

Chapter Home

Introduction

Here's the big dog! You'll find facts amassed through over a thousand hours of research; checking through websites, discarding facts that didn't seem to have a solid basis of truth, keeping facts that seemed to be from fair parties, even including facts that contradict each other, just to get an idea of the knowledge base and possibility out there. In here you'll not only find facts on everything from Active Heating and Cooling to Waste, Water, and Wind Power, you'll find something almost as important; the links to each fact. These links are gold mines, taking you on a much more in-depth journey into the realm of information. Many of these links will take you to pages that explain the fact you see here in this sheet, that put it in context so that you can understand its significance. So sit back, settle down into reading mode, and enjoy the facts!

About This Document

NAVIGATION: These facts have been organized into the categories you see on the Chapter page. You can click on each chapter heading to go directly to that chapter. At any time, you can click on the Chapter Home link found at the top and bottom of each page to be taken back to the chapter home page.

USING THE SOURCE LINKS: Each of these facts has a link below it, in blue. Clicking on the link will take you to the page on the web where the fact was found. Many times, you'll learn much more than you could have from the fact alone by clicking on the link.

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You'll find a few facts that contradict each other; we felt those were important to put in to show you how variable both knowledge and our (science's) interpretation of it can be. Let us know if you have any questions or comments: info@exupinc.com

You'll also find a few facts that are repeats; same fact, different categories. These are facts that we felt fit both categories. We tried to keep this to a minimum, to make the document as user-friendly as possible.

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Thanks, and enjoy the facts!

GREEN FACTS CHAPTER HOME

Click on any of the chapter titles below to be taken directly to that chapte

ACTIVE HEATING AND COOLING

1) Heating and cooling the average American Home costs $600 per year, nearly half the energy bill.
Source: http://www.energystar.gov/index.cfm?c=heat_cool.pr_hvac

2) Air leakage accounts for 25-40% of the energy used for heating and cooling a home.
Source: http://www.energystar.gov/index.cfm?c=new_homes_features.hm_f_reduced_air_infiltration

3) 10-20% of energy used to heat and cool air is lost to conduction through duct surfaces in non-climate controlled areas.
Source: http://www.energystar.gov/ia/new_homes/features/DuctInsulation1-17-01.pdf

4) Space conditioning accounts for 40% of the cost of the average American residential yearly energy bill.
Source: http://www.energystar.gov/index.cfm?c=heat_cool.pr_hvac

5) Heat pumps can reduce space conditioning costs by 30% or more.
Source: http://www.energystar.gov/ia/products/heat_cool/GUIDE_2COLOR.pdf

6) Windows can account for 25% of heating energy in a heating-dominated climate and 50% of the cooling load in a cooling-dominated climate.
Source: http://www.energystar.gov/ia/new_homes/features/HighPerformanceWindows1-17-01.pdf

7) Heating and cooling systems in the U.S. emit over a half billion tons of carbon dioxide into the atmosphere each year, as well as generate about 24% of the nation's sulfur dioxide and 12% of the nitrogen oxides, the chief ingredients in acid rain.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/heatcool.html

8) Air conditioning costs an average of $250 a year to operate.
Source: http://www.ci.boulder.co.us/environmentalaffairs/energy/electric.htm

9) Oversizing ducts allows high air flow and low friction loss, and can provide as much as 12% improvement in cooling efficiency at essentially no extra cost.
Source: http://www.eere.energy.gov/buildings/building_america/pdfs/37547_zeh.pdf

10) If you use air conditioning, a ceiling fan will allow you to raise the thermostat setting about 4F with no reduction in comfort.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/ventilation.html

11) Evaporative coolers use less than one-third the energy of air conditioners, and cost about half as much to install.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/ventilation.html

12) Ventilated attics are about 30 degrees F cooler than unventilated attics.
Source; http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

13) Heat recovery ventilators can salvage about 70% of the energy from the stale exhaust air and transfer that energy to the fresh air entering by way of a heat exchanger inside the device.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/eehouse.html

14) Heating and cooling account for about 56% of the energy use in a typical U.S. home.
Source:
http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12300

15) Water heating can account for 14-25% of the energy consumed in a home.
Source: http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12760

16) About one sixth of all the electricity generated in the U.S. is used to air condition buildings.
Source: http://www.energystar.gov/index.cfm?c=cac.pr_central_ac

17) Replacing a 10-year-old room air conditioner with a new Energy Star qualified model saves an average of $14 a year on your electric bill.
Source: http://www.energystar.gov/index.cfm?c=roomac.pr_room_ac

18) Installing a solar hot water heater can help drop water heating bills by 50-80%
Source: http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12860

19) You can save as much as 10% a year on heating and cooling bills by simply turning the thermostat back 10-15% for eight hours a day.
Source:
http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12720

20) For each 10 degrees F reduction in water temperature on a water heater, you can save between 3-5% in energy costs.
Source: http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=13090

21) Insulating your hot water pipes reduces heat loss and can raise water temperatures 2-4 degrees F hotter than uninsulated pipes.
Source: http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=13060

22) Whether gas or oil, Energy Star qualified boilers use about 10% less energy than a standard boiler.
Source: http://www.energystar.gov/index.cfm?c=boilers.pr_boilers

23) Air infiltration can account for 30% or more of a home's heating and cooling costs and contribute to problems with moisture, noise, dust, and the entry of pollutants, insects, and rodents.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26448.pdf

24) Home energy costs in an average dwelling break down as follows:
- Refrigerator: 10%
- Hot Water Heating: 16%
- Lighting, Cooking, and other appliances: 33%
- Heating and Cooling: 41%

Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/central_heat_pump_ac_install-0781.pdf

25) Improperly charged heat pumps and air conditioners can reduce system capacity and efficiency by 20 percent or more.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/central_heat_pump_ac_install-0781.pdf

26) Poor design and installation of heating, ventilation, and air conditioning (HVAC) equipment commonly increases energy costs 10-30% in affordable housing.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

27) Conditioning equipment reaches its highest operating efficiency only after about 5-15 minutes of continuous run-time.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26459.pdf

28) Typical duct systems lose 25-40% of the heating or cooling energy put out by the central furnace, heat pump, or air conditioner.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/27630.pdf

29) A Florida study showed a typical 9% increase in annual space cooling electricity usage for cooling units that were oversized by 50% or more.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/31318.pdf

30) Domestic water heating accounts for between 15 and 25% of the energy consumed in homes.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26465.pdf

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AGRICULTURE

1) 16% of America lives in rural areas.
Source: www.ers.usda.gov

2) Cattle and calves were the top U.S. agricultural commodities. Soybeans were fourth.
Source: www.ers.usda.gov

3) Anaerobic digesters—also known as biodigesters—usually require manure from more than 150 large animals to cost effectively generate electricity.
Source:
http://www.eere.energy.gov/consumer/your_workplace/farms_ranches/index.cfm/mytopic=30005

4) Heating water and cooling milk can account for up to 40% of the energy used on a dairy farm.
Source:
http://www.eere.energy.gov/consumer/your_workplace/farms_ranches/index.cfm/mytopic=30006

APPLIANCES

1) Appliances can account for 35% of total energy use on average, and in mild climates can account for 50% of total energy use.
Source: http://www.energystar.gov/ia/new_homes/features/EstarAppliances1-17-01.pdf

2) Of the energy used for clothes-washing, over 90% is used to provide hot water.
Source: http://www.energystar.gov/ia/new_homes/features/EstarAppliances1-17-01.pdf

3) Refrigerators consume the most energy of the standard household appliances, more than 1300 kWh/mo for the average model in use today.
Source: http://www.energystar.gov/ia/new_homes/features/EstarAppliances1-17-01.pdf

4) Refrigerators account for 9% of the total energy used in a home.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/energyuse.html

5) A refrigerator uses almost five times the electricity the average television uses.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/appliance_barchart.html

6) Appliances cost an average of $500 a year to operate.
Source: http://www.ci.boulder.co.us/environmentalaffairs/energy/electric.htm

7) A clothes dryer uses more electricity than every other appliance after the refrigerator, and costs about $85 to operate annually.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/virtualhome/508/dryer.html

8) A clothes dryer will cost about $1,100 to operate over its lifetime.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/virtualhome/508/dryer.html

9) Cooking food and washing dishes cost the average U.S. household $125 a year, and account for about 10% of all energy used in a home.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/virtualhome/508/oven.html

10) Water heating is the third largest expense in a home (after space heating and cooling). It typically accounts for 14% of a residential utility bill.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/virtualhome/508/water_heater.html

11) In the past twenty years, refrigerators have made efficiency gains of 100%.
Source: http://www.ftc.gov/bcp/conline/edcams/eande/popups/20years.htm

12) Typically, front loading washing machines use one-third to one-half the amount that top-loaders require.
Source: http://www.ftc.gov/bcp/conline/pubs/alerts/washmachalrt.htm

13) About 90% of the electricity used by incandescent bulbs is lost as heat.
Source: http://www.ftc.gov/bcp/conline/pubs/products/ffclight.htm

14) Inefficient clothes washers can cost three times as much to operate than energy-efficient ones.
Source: http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=13050

15) Energy Star qualified refrigerator models use at least 15% less energy than required by current federal standards and 40% less than the conventional models sold in 2001.
Source: http://www.energystar.gov/index.cfm?c=refrig.pr_refrigerators

16) Lighting and appliances used 27% of all energy consumed in residences and accounted for more than 45% of the energy costs in 1997.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

17) Refrigerators and freezers consume about one-sixth of all the electricity used in American households, much more than any other household appliance.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

18) Side-by-side refrigerators use approximately 10-25% more energy than top-freezer models.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

19) Automatic defrost freezers can consume 40-50% more electricity than manual defrost models.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

20) 90% of the energy used in operating a washing machine goes toward heating the water that will wash and rinse the clothes. The motor uses only 10% of the total energy consumed.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

21) Horizontal-axis washing machines typically use one-third the water of a conventional machine to wash the same amount of clothes.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

22) Built-in clocks and timers on appliances use as much energy every day as is needed to run a compact fluorescent bulb continuously for 10 hours.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

BUILDING MATERIALS & RECYCLING

1) In the U.S., building accounts for 39% of total energy use, 12% of total water consumption, 68% of total electricity consumption, and 38% of CO2 emissions.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

2) 64 millions homes in the U.S. (83% of privately owned housing units built before 1980) have lead based paint somewhere in the building.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

3) More than 1.8 million residential buildings are built annually.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

4) 5% of the continental U.S. is “developed”, or built upon.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

5) Building-related construction and demolition debris totals approximately 136 million tons per year, accounting for nearly 60% of total non-industrial waste generation in the U.S.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

6) Approximately 43 percent of construction and demolition debris is generated from residential sources, and 57% from non-residential sources.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

7) An estimated 20-30% of building-related construction and demolition debris is recovered for processing and recycling.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

8) Recycling aluminum cans saves 95 percent of the energy required to make the same amount of aluminum from its virgin source, bauxite.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#3

9) Most substances used in conventional buildings contain high levels of toxins, with side effects ranging from irritation in the eyes to anesthetic effects of the central nervous system.
Source: http://householdproducts.nlm.nih.gov/cgi-bin/household/brands?tbl=brands&id=14014006

10) Green roofs can absorb 75% of the rainwater falling on them, reducing stormwater runoff and heat island effects.
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

11) Paper takes up 40% of the space in our landfills.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#3

12) U.S. recycling rates for commonly recycled consumer goods in 2003: Newspapers: 82.4%
Corrugated Cardboard Boxes: 71.3%
Steel Cans: 60.0%
Yard Trimmings: 56.3%
Aluminum Beer and Soft Drink Cans: 43.9%
Scrap Tires: 35.6%
Magazines: 33.0%
Plastic Milk and Water Bottles: 31.9%
Plastic Soft Drink Bottles: 25.2%
Glass Containers: 22.0%
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#3

13) In 2000, recycling resulted in an annual energy savings of at least 660 trillion BTUs, which equals the amount of energy used in 6 million households annually. In 2005, recycling is conservatively projected to save 900 trillion BTUs, equal to the annual energy use of 9 million households.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#3

14) Recycling, which includes composting, diverted 72 million tons of material away from landfills and incinerators in 2003, up from 34 million tons in 1990—doubling in just 10 years.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#2

15) Twenty-five states around the country use some type of tax incentive or credit to promote recycling market development.
Source: http://www.epa.gov/jtr/bizasst/rec-tax.htm

16) The U.S. leads the industrialized world in MSW (Municipal Solid Waste) generation, with each person in the U.S. currently generating about 4.5 pounds of waste per person per day. Germany and Sweden generate the least amount of waste, with just under 2 pounds of waste per person per day.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#4

17) The U.S. leads the industrialized world in recycling (as of 1995), recycling 24% of its waste.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#4

18) According to The U.S. Recycling Economic Information Study, more than 56,000 recycling and reuse establishments in the United States employ approximately 1.1 million people, generate an annual payroll of $37 billion, and gross $236 billion in annual revenues.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#3

19) The U.S. generated 232 million tons of MSW in 2000, recovering and recycling 30%, or almost 70 million tons of the materials in the waste stream.
Source: http://www.ciwmb.ca.gov/

20) In 1996, recycling and composting diverted a total of 130 million cubic yards of material away from landfills; the 2005 projections are for 195 million cubic yards. 195 million cubic yards is enough to fill 92 landfills large enough to serve the combined populations of Dallas and Detroit.
Source: http://www.ofee.gov/eo/greening.pdf

21) California generates an estimated 76 million tons of waste per year.
Source: http://www.ciwmb.ca.gov/

22) Construction and demolition materials account for almost 28% of the waste stream, with 25% of that stream made up of wood.
Source: http://www.ciwmb.ca.gov/ConDemo/Wood/Lumber.htm

23) Over 500 million batteries were sold in California in 2001; just over .5% were recycled.
Source: http://www.ciwmb.ca.gov/WPIE/Batteries/

24) California generates 3.8 million tons of wood waste per year. Of that, 3.35 million tons are disposed of in permitted disposal facilities and the remaining 450,000 are diverted from landfilling.
Source: http://www.ciwmb.ca.gov/ConDemo/Wood/default.htm

25) In Massachusetts alone, recycling accounts for 19,500 jobs with an annual payroll of $557 million, $3.5 billion in receipts, and generates roughly $64 million in state tax revenues.
Source: http://www.mass.gov/dep/recycle/business.htm

26) Sorting and processing recyclables provides 10 times more jobs than if the same materials were thrown away.
Source: http://www.mass.gov/dep/recycle/business.htm

27) Recycling and remanufacturing industries account for approximately one million manufacturing jobs and more than $100 billion in revenue.
Source: http://www.epa.gov/jtr/econ/index.htm

28) Between 1980 and 1990, recycling of Municipal Solid Waste (MSW) in the U.S. grew from 9.6% to16.2%. By 2003, the recycling rate was 30.6%.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/recbkgnd.pdf

29) 67% of the U.S. steel industry is fed by scrap steel, 42% of the aluminum industry is fed by scrap aluminum, and 38% of the paper industry is fed by secondary fiber.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/recbkgnd.pdf

30) Increases in waste reduction from 3%-52% resulted in a cost cutting per household from $122 to $73 in Dover, New Hampshire.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/recbkgnd.pdf

31) Local communities have reached waste reduction levels of 40-65% through composting organic materials, improving collection efficiency, using “pay as you throw”, and tapping a wide range of materials for recovery.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/recbkgnd.pdf

32) The EPA estimated an annual savings to local governments of $1.3 billion over traditional disposal methods from better management of 62 million tons of organic waste nationally.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/recbkgnd.pdf

33) Ford Motor Company used more than 60 million 2-liter plastic soda bottles in the manufacturing of grille reinforcements, window frames, engine covers, and trunk carpets. In 1999, this effort accounted for 3,750 tons of plastic.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/about/id-motor.htm

34) According to manufacturers, bamboo flooring should last 30-50 years.
Source: http://www.ciwmb.ca.gov/Publications/GreenBuilding/43303017.pdf

35) In California, generation of “inert solid waste”, which consists of concrete, dirt, brick and other rubble, was conservatively estimated at 8.2 million tons. The estimated recycling rate for inert solid wastes was 57%; the remainder was disposed of.
Source: http://www.ciwmb.ca.gov/ConDemo/Roads/

36) According to the Asphalt Recycling and Reclaiming Association, cost savings for recycling asphalt can range from 20-40% over conventional techniques. Because no heat is used in cold-planing, energy savings can be from 40-50%.
Source: http://www.ciwmb.ca.gov/ConDemo/Roads/

37) The construction of a 2,000 sq ft house generates approximately 3.5 tons of waste.
Source: www.ciwmb.ca.gov/GreenBuilding/Residential/

38) In 2003, U.S. residents, businesses, and institutions produced more than 236 million tons of Municipal Solid Waste.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/facts-text.htm - chart1

39) Recycling, including composting, diverted 72 million tons of material away from disposal in 2003.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

40) In 1996, recycling of solid waste in the United States prevented the release of 33 million tons of carbon into the air—roughly the amount emitted annually by 25 million cars.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

41) Typical materials that are recycled include batteries, recycled at a rate of 93%, paper and paperboard at 48%, and yard trimmings at 56%.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

42) During fiscal year 2004, 241 million beverage containers were redeemed by Nova Scotians, representing a return rate of 79%.
Source: http://www.gov.ns.ca/enla/waste/docs/WasteResourceStatus2004.pdf

43) 61% of New York City’s solid waste comes from the construction and demolition of buildings.
Source: http://www.nyc.gov/html/ddc/html/ddcgreen/documents/gprimer.pdf

44) Buildings account for: 49% of sulfur dioxide emissions, 25% of nitrous oxide emissions, and 10% of particulate emissions.
Source: http://www.sustainable.doe.gov/buildings/gbintro.shtml

45) A standard wood-framed home consumes over one acre of forest and the waste created during construction averages from 3-7 tons.
Source: http://www.sustainable.doe.gov/buildings/gbintro.shtml

46) In the average home, 75% of the electricity used to power home electronics is consumed while the products are turned off.
Source:
http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductCategory&pcw_code=HEF

47) If all cordless phones, answering machines, and cordless phone/answering machine combination units sold in the U.S. this year were Energy Star, we would prevent over 650 million pounds of air pollution—the equivalent of taking over 7,000 cars off the road.
Source:
http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CL

48) The city of Alameda (in California) diverts more than 140,000 tons of recyclable/reusable materials from landfills.
Source: http://www.ciwmb.ca.gov/publications/Markets/41203022.pdf

49) In homes with significant amounts of new pressed wood products, formaldehyde levels can be greater than .3ppm, or 3 times the level that causes health impingements (watery eyes, burning sensations in the eyes and throat, nausea, and difficulty breathing in some humans).
Source: http://www.epa.gov/iaq/formalde.html

50) Bamboo has a 3-5 year harvest cycle, making it a rapidly renewable material. In contrast, most hardwood species used for flooring reach saleable size in 50 to 100 years.
Source: http://www.ciwmb.ca.gov/Publications/GreenBuilding/43303017.pdf

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BUILDINGS

1) Low-e windows can block up 98% of UV radiation from the sun.
Source: http://www.energystar.gov/ia/new_homes/features/HighPerformanceWindows1-17-01.pdf

2) Dark-colored home exteriors absorb 70-90% of the radiant energy from the sun that strikes the home's surfaces.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/landscaping.html

3) A well-designed sunspace can provide up to 60% of a home's winter heating requirements.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/sunspace.html

4) Building the first LEED Gold state-owned office building in the country, the Education Headquarters Building, saves taxpayers in California $500,000 a year in energy costs alone.
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/

5) An additional 0-2% of a building's construction costs in sustainable building design measures upfront results in savings of 20% or more of those construction costs over the building's lifetime (assumed, conservatively to be 20 years).
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/Document.pdf

6) In one year, California was able to reduce average energy use in state owned buildings by 20%.
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/Document.pdf

7) Contracts for new construction or major renovation of state facilities in California must surpass Title 24 standards by 10% or meet other energy efficient criteria.
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/Document.pdf

8) In the EPA building in Sacramento, which is expected to earn a Platinum LEED-EB rating, energy savings are $100,000 annually, and building management reports that due to energy efficiency, water conservation, waste diversion and other changes, the operations and maintenance budget is 82 cents less per square foot than the Sacramento average.
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/Document.pdf

9) According to Department of Energy research, 1 additional percent of roof reflectivity on average will reduce roof temperature by 1 degree F.
Source: http://www.ci.austin.tx.us/greenbuilder/fs_coolroof.htm

10) U.S. buildings consume more energy than any other sector of the economy, including transportation and industry.
Source: http://www.eere.energy.gov/buildings/tech/index.html

11) Buildings use one-third of U.S. total energy, and two thirds of U.S. electricity.
Source: http://www.gsa.gov/gsa/cm_attachments/GSA_DOCUMENT/sus_dev_guide_R2O1X_0Z5RDZ-i34K-pR.pdf

12) Building construction consumes one-fourth of all harvested wood; 3 billion tons of raw materials are used annually to construct buildings worldwide.
Source: http://www.gsa.gov/gsa/cm_attachments/GSA_DOCUMENT/sus_dev_guide_R2O1X_0Z5RDZ-i34K-pR.pdf

13) Buildings consume 17% of water and 50% of CFCs, as well as produce, directly or indirectly, 33% of CO2 and 40% of landfill waste.
Source: http://www.gsa.gov/gsa/cm_attachments/GSA_DOCUMENT/sus_dev_guide_R2O1X_0Z5RDZ-i34K-pR.pdf

14) If only 10 percent of homes in the U.S. used solar water-heating systems, we would avoid 8.4 million metric tons of carbon emissions each year.
Source: http://www.sustainable.doe.gov/buildings/gbintro.shtml

15) Commercially available, cost-effective technologies could reduce overall energy consumption in the U.S. by as much as 1/3—worth some $343 billion.
Source: http://www.sustainable.doe.gov/buildings/gbintro.shtml

16) Leaky ducts can reduce the efficiency of a home's heating and cooling systems by 20%.
Source: http://www.energystar.gov/index.cfm?c=ducts.pr_ducts

17) About one sixth of all the electricity generated in the U.S. is used to air condition buildings.
Source: http://www.energystar.gov/index.cfm?c=cac.pr_central_ac

18) Commercial buildings consume 17% of the total energy consumed in the United States.
Source: http://www.eere.energy.gov/buildings/highperformance/design_approach.html#benefits

19) Simple energy efficiency improvements can cut energy costs by over 40% in most affordable housing.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

20) Some low-income families may spend over 15% of their income on energy to operate their home.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

21) Energy efficient framing techniques can reduce lumber costs over 15% and prevent mold growth in outside walls and ceilings.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

22) Poor design and installation of heating, ventilation, and air conditioning (HVAC) equipment commonly increases energy costs 10-30% in affordable housing.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

23) Reducing air leakage typically costs less than $200 for the average home and is required by the Model Energy Code.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

24) If only one half the typical loss of uninsulated and unsealed ducts that are in attics or crawl spaces were saved, it would take $160 off the total heating and cooling bill in a typical home.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/27630.pdf

25) In climates with mild winters, slab-on-grade insulation in a typical 1,800 sq ft home would save $50-$60 annually over an uninsulated slab. R-10 insulation for a 1,800 square foot home would typically cost $300-600 to install. Thus, the insulation would pay for itself in 5-10 years.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/29237.pdf

26) In a 100 sq ft wall, one cup of water can diffuse through drywall without a vapor barrier in a year, but 50 cups can enter through a ½ inch round hole. Sealing air leaks is 10-100 times as important as installing a vapor barrier.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26451.pdf

27) The 4.6 million commercial buildings in the U.S account for approximately one-sixth of total national energy consumption and 32% of total national electricity consumption.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/roadmap_lowres.pdf

28) Consumption of electricity in the commercial building sector has doubled in the last 18 years, and can be expected to increase by another 25% by 2030 if current growth rates continue.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/roadmap_lowres.pdf

29) An efficiency improvement of 30% in commercial building energy consumption would yield $30 billion per year in bottom-line savings.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/roadmap_lowres.pdf

30) 67% of all the newsprint used in California in 2004 was recycled content newsprint (RCN), the highest rate since the recycling program began in 1991.
Source: http://www.ciwmb.ca.gov/publications/BuyRecycled/43305016.pdf

31) In 2004, California consumers used 1,049,941 metric tons of RCN, a 5% increase from 2003.
Source: http://www.ciwmb.ca.gov/publications/BuyRecycled/43305016.pdf

32) Total newsprint use in California decreased by 2% from 2003.
Source: http://www.ciwmb.ca.gov/publications/BuyRecycled/43305016.pdf

33) Estimated resource savings from recycling newsprint in 2004 were: 5 million trees, 1.2 million cubic yards of landfill space, 700,000 barrels of oil, 150 million gallons of water from paper-making, 700,000 megawatt hours of electricity, enough to heat and air condition 30,000 average North American homes for at least a year.
Source: http://www.ciwmb.ca.gov/publications/BuyRecycled/43305016.pdf

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ENERGY

1) Buildings accounted for 39.4% of total U.S. energy consumption and 67.9% of total electricity consumption in 2002.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

2) 281 gigawatts of new capacity will be needed in the U.S. by 2025, with more than 60% of new capacity additions projected to be natural-gas-fired combined cycle, combustion turbine, or distributed generation technologies.
Source: http://www.eia.doe.gov/oiaf/aeo/electricity.html

3) Non-hydro renewable energy accounted for 3% of net electricity generation in 2003.
Source: http://www.eia.doe.gov/kids/infocardnew.html#RENEWABLE%20ENERGY

4) Renewable energy will provide about 5% of new capacity (15 gigawatts) by 2025.
Source: http://www.eia.doe.gov/oiaf/aeo/electricity.html

5) An average California household uses 6,500 kWh of electricity per year. The 3.5 billion kilowatt-hours (kWh) of annual electricity generated from wind resource in the state provide electricity sufficient to power over 530,000 homes.
Source: http://www.energy.ca.gov/wind/windfacts-new.html

8) The national average for residential use is 906 kWh per month, or 10,872 kWh per year. This equals an average monthly bill of $78.84.
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

9) In 2003, U.S. electricity production (net generation) was 3,883,185 Million Kilowatt-hours.
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

10) The 2003 industry share of net generation by energy source was: Coal-51%, Nuclear-20%, Gas-17%, Hydro-7%, Oil-3%, Other-3%
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

11) In 2000 there were 2,776 electric utility plants in the U.S.
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

12) The largest utility plant in the U.S. by capacity is the hydropower plant at Grand Coulee, operated by the Bureau of Reclamation, with a (summer) capacity of 7,079 Mw. The largest electric utility plan of net generation is the Palo Verde Nuclear plant operated by the Arizona Public Service Co., producing 28,572,902 MwH.
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

13) In 2003 the highest priced electricity could be found in Hawaii, at 14.47 cents/kWh, and the lowest was in Kentucky, at 4.42 cents/kWh.
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

14) Residential buildings account for about 31% of electricity consumed in California
Source: http://www.ciwmb.ca.gov/GreenBuilding/Residential/

15) The average house uses about 500 or 600 kilowatt hours per month
Source: http://www.nrel.gov/wind/video_clip.html

16) Residential energy use accounts for 20% of the air pollution in the U.S.
Source: www.energystar.gov

17) In the United States, electricity is responsible for 35% of all emissions of carbon dioxide, 75% of all sulfur dioxide, and 38% of all nitrogen oxides. Each kilowatt-hour of electricity results in over two pounds of carbon dioxide being released into the atmosphere.
Source: http://www.eia.doe.gov/neic/quickfacts/quickelectric.htm

18) It takes the equivalent of 7 gallons of gasoline per day for every man woman and child to keep this country running at its current pace.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html

19) The U.S. is home to 5% of the world's population, yet consumes 26% of the world's energy.
Source: http://www.eia.doe.gov/neic/quickstats.html

20) Through energy use the average home emits more harmful CO2 gas than the average car.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/energy/pg_saving_energy_page.htm

21) The production and use of energy is the leading source of humanity's greenhouse gas emissions.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/energy/pg_saving_energy_page.htm

22) Using one hour less heating a day, you could cut your fuel bills by 10%.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/energy/pg_saving_energy_page.htm

23) Up to 20% of heat lost from a home can be through windows. Double-glazing can reduce this loss by up to 50%.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/energy/pg_saving_energy_page.htm

24) Replacing a boiler that is over 15 years old, or unreliable, could save 10-15% on fuel bills.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/energy/pg_saving_energy_page.htm

25) Lighting accounts for 20% of the average household electricity bill.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/energy/pg_saving_energy_page.htm

26) The Federal government spends more than $3 billion a year on its electric bill for more than 500,000 Federal facilities.
Source: http://www.nrel.gov/docs/fy99osti/26242.pdf

27) The Department of Defense is one of the largest consumers of renewable energy in the nation.
Source: http://www.nrel.gov/docs/fy99osti/26242.pdf

28) The value of a home increases from $11 to $25 for every $1 reduction in annual utility bills.
Source: http://www.nrel.gov/docs/fy99osti/26242.pdf

29) The typical home energy annual bill is $1,282.
Source: http://www.eia.doe.gov/emeu/recs/recs2a.html

30) New homes (built between 1988 and 1993) use energy at a rate that is 82% of the rate used by homes built before 1980.
Source: http://www.eia.doe.gov/emeu/recs/recs2a.html

31) Energy is the third-highest cost of education after teacher salaries and benefits.
Source: http://www.nrel.gov/ncpv/pdfs/30150.pdf

32) Scotland has enough natural resources in the form of wind, hydro, and marine energy (estimated to be almost 60 gigawatts) to equal three-quarters of the entire UK installed electricity generation capacity.
Source: http://www.scotland.gov.uk/consultations/environment/tgjsc.pdf

33) In 2002, the E.U. used about 2.6 trillion kWh of electricity.
Source: http://www.cia.gov/cia/publications/factbook/geos/ee.html

34) In 2001, the E.U. consumed 14.54 million bbl/day of oil.
Source: http://www.cia.gov/cia/publications/factbook/geos/ee.html

35) In 2002, the U.S. used about 3.6 trillion kWh of electricity.
http://www.cia.gov/cia/publications/factbook/geos/us.html

36) In 2001, the U.S. consumed about 19.65 million bbl/day of oil.
Source: http://www.cia.gov/cia/publications/factbook/geos/us.html

37) In 2003, the U.S. government consumed 1,109 petajoules (a joule is a measurement of energy; a 60 watt lightbulb uses 60 joules per second). Of that amount, 884 petajoules, or 79% was used by the Department of Defense, with the next highest single user being the Postal Service, using 43 petajoules, or 3% of that total.
Source:
http://www.bts.gov/publications/national_transportation_statistics/2005/html/table_04_19_m.html

38) The typical household spends over $1,500 per year on energy bills. Using Energy Star qualified appliances can save up to 30% or $450 per year.
Source: http://www.energystar.gov/index.cfm?c=appliances.pr_appliances

39) Buildings in the U.S. use one third of all energy consumed in the U.S. and two thirds of all electricity.
Source: http://www.sustainable.doe.gov/buildings/gbintro.shtml

40) A desktop computer can use 5 times as much electricity as a laptop.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/ec7.html

41) About one sixth of all the electricity generated in the U.S. is used to air condition buildings.
Source: http://www.energystar.gov/index.cfm?c=cac.pr_central_ac

42) Direct use of geothermal energy can result in savings as much as 80% over fossil fuels.
Source: http://www.eere.energy.gov/geothermal/directuse.html

43) Electricity use in televisions that are turned “off” costs the U.S. more than $750 million each year. The electricity is used to maintain the remote control and instant-on features, and to keep the filaments in the picture tube warm 24 hours a day.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

44) Phantom loads consume about 43 billion kWh of electricity per year in the U.S.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

45) Electric lighting consumes about 20% of the electricity used in U.S. buildings.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/ssli_brochure.pdf

46) The 4.6 million commercial buildings in the U.S account for approximately one-sixth of total national energy consumption and 32% of total national electricity consumption.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/roadmap_lowres.pdf

47) Consumption of electricity in the commercial building sector has doubled in the last 18 years, and can be expected to increase by another 25% by 2030 if current growth rates continue.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/roadmap_lowres.pdf

48) At full capacity, California’s biomass-to-energy industry has the potential to supply about 2% of California’s electrical needs during periods of peak demand.
Source: http://www.ciwmb.ca.gov/Organics/Conversion/

49) In 1999, California’s 29 operating biomass-to-energy facilities consumed 6.4 million tons of biomass materials, including wood processing, forestry, agricultural, and urban wood residuals.
Source: http://www.ciwmb.ca.gov/Organics/Conversion/

50) California’s generating capacity with biomass-to-energy (BtE) materials is 600 megawatts, and in 1999, California BtE plants produced 3 million megawatt-hours of electricity.
Source: http://www.ciwmb.ca.gov/Organics/Conversion/

51) The U.S. meets 85% of its energy needs through burning fossil fuels.
Source: http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html

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GREEN ECONOMY

1) Wind energy provides 40-160 construction jobs and 10-25 operations and maintenance jobs per 100 MW.
Source: http://www.nrel.gov/docs/fy05osti/37602.pdf

2) According to The U.S. Recycling Economic Information Study, more than 56,000 recycling and reuse establishments in the United States employ approximately 1.1 million people, generate an annual payroll of $37 billion, and gross $236 billion in annual revenues.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#3

3) The current U.S. solar industry employs about 20,000 people.
Source: http://www.eere.energy.gov/solar/to_economy.html

4) By 2020, the solar workforce is expected to grow to 150,000 people.
Source: http://www.eere.energy.gov/solar/to_economy.html

5) The solar industry's goal is to meet 10% of U.S. peak generation capacity by 2030—the energy equivalent of 180 million barrels of oil that year.
Source: http://www.nrel.gov/ncpv/pdfs/30150.pdf

6) By 2020 solar-electric expects to be a $15 billion dollar industry.
Source: http://www.nrel.gov/ncpv/pdfs/30150.pdf

7) The solar-electric industry is growing at 25% per year.
Source: http://www.nrel.gov/ncpv/pdfs/30150.pdf

8) At the federal level, most energy tax benefits focus on mature energy technologies in mature markets, with estimated federal subsidies ranging from $2 to $8 billion per year. As a whole, renewable energy technologies receive only a small share of these energy subsidies—about $100 million per year of federal tax subsidy, with more than 80 percent of this amount going to wind and geothermal
Source: http://www.nrel.gov/ncpv/pdfs/30150.pdf

9) The U.S. investment in PV RD&D has been in the range of $500 to $75 million per year, significantly less than the government's investment in conventional energy technologies.
Source: http://www.nrel.gov/ncpv/pdfs/30150.pdf

10) The composting industry has grown from less than 1,000 facilities in 1988 to nearly 3,800 in 2000.
Source: http://www.epa.gov/epaoswer/non-hw/composting/basic.htm

11) Wind turbine manufacture, maintenance, installation and consultancy services account for some 16,000 jobs in Denmark, while component supplies and installation of Danish turbines currently support another 8,000 jobs worldwide.
Source: http://www.scotland.gov.uk/consultations/environment/tgjsc.pdf

12) The management, use and appreciation of the natural environment in Wales directly supports an estimated 117,000 jobs.
Source:
http://www.ccw.gov.uk/generalinfo/index.cfm?Action=ResourceMore&ResourceID=125&Subject=currentissues&lang=en

13) Nova Scotia's waste resource program, geared towards recycling, has created 1000 jobs.
Source: http://www.gov.ns.ca/enla/waste/docs/WasteResourceStatus2004.pdf

14) Environmental scientists and geoscientists held about 101,000 jobs in 2002. Environmental scientists accounted for 65,000 of the total, geoscientists, 28,000; and hydrologists, 8,000.
Source: http://www.bls.gov/oco/ocos050.htm

15) The University of California system has committed to a system-wide Green Building Policy and Clean Energy Standard that will impact over 20 million square feet of space slated for construction from 2003-2013.
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/Document.pdf

16) The city of Alameda's Jobs Through Recycling program created more than 100 jobs, generated $2 million in wages, and $18,562,897 in secondary spending.
Source: http://www.ciwmb.ca.gov/publications/Markets/41203022.pdf

17) Potential economic savings from environmental management practices could reach $45 billion annually.
Source:
http://yosemite1.epa.gov/ee/epa/eed.nsf/Webpages/USExperienceWithEconomicIncentives.html

18) Acid rain tradings savings are at least $700 million annually.
Source:
http://yosemite1.epa.gov/ee/epa/eed.nsf/Webpages/USExperienceWithEconomicIncentives.html

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NON-RENEWABLE FUELS

1) In 2002, fossil fuels that are finite and nonrenewable supplied 86% of the energy consumed in the United States.
Source: http://www.eere.energy.gov/biomass/biomass_benefits.html

2) The United States imports over half (62%) of its petroleum.
Source: http://www.eere.energy.gov/biomass/biomass_benefits.html

3) Fossil fuels – coal, oil and natural gas – account for nearly two-thirds of our electricity and virtually all of our transportation fuels.
Source: http://www.doe.gov/engine/content.do?BT_CODE=FOSSILFUELS

4) There are 42 gallons of oil per barrel, and 7.33 barrels per metric ton (U.S.)
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html

5) In 2004, the U.S. produced almost 5.5 million barrels a day and imported just over 10 million barrels a day, half of which was from OPEC nations.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html

6) In 2004, the top U.S. foreign supplier was Canada, with 1.616 million barrels a day.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html

7) In 2004, U.S. imported just over 3 millions barrels a day of petroleum products.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html#anote

8) In 2004, U.S. petroleum consumption (Consumption refers to Products Supplied, which is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.) was 20.731 million barrels a day.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html#anote

9) U.S dependence on net petroleum imports was 57.8% in 2004.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html#anote

10) As of December 2003, the U.S. had almost 22 million barrels of proven reserves, enough for a little more than a day's total petroleum consumption.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html#anote

11) The U.S. Strategic Oil Reserve was 676 million barrels of oil, enough for just over 32 days of total national consumption.
Source: http://www.eia.doe.gov/neic/quickfacts/quickoil.html#anote

12) The U.S. has 104 nuclear reactors, which provide 763,733 Million Kilowatt-hours or 20% of U.S. electricity generation.
Source: http://www.eia.doe.gov/neic/quickfacts/quicknuclear.htm

13) Nuclear power costs 0.46 Cents/KwH vs. 1.74 Cents/KwH for fossil steam.
Source: http://www.eia.doe.gov/neic/quickfacts/quicknuclear.htm

14) The countries with the most nuclear reactors are: U.S. – 104, France – 59, Japan – 53, Russia – 30, United Kingdom – 27.
Source: http://www.eia.doe.gov/neic/quickfacts/quicknuclear.htm

15) The U.S. production of concentrated Uranium was 2.3 million pounds in 2004, with an average price of $12.61 per pound.
Source: http://www.eia.doe.gov/neic/quickfacts/quicknuclear.htm

16) In 2003, burning coal produced 50.8% of electricity generation in the U.S., and supplied 33% of the electric power industry capacity.
Source: http://www.eia.doe.gov/neic/quickfacts/quickcoal.htm

17) Most new electricity generation capacity is expected to be fueled by natural gas. Reserves are expected to be 207 trillion cubic feet in 2008, with a usage of 22 trillion cubic feet in 2003.
Source: http://www.eia.doe.gov/neic/quickfacts/quickgas.htm

18) The world's top five crude oil-producing countries are: Saudi Arabia, Russia, United States, Iran, China and Mexico are tied for 5th.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html

19) Over one-fourth of the crude oil produced in the United States is produced offshore in the Gulf of Mexico.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html

20) One barrel of crude oil produces about 20 gallons of finished motor gasoline and 7 gallons of diesel, as well as other petroleum products.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html

21) Products made from petroleum include ink, crayons, bubblegum, dishwashing liquid, deodorant, eyeglasses, records, tires, ammonia, and heart valves.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html

22) Only 2% of all oil in the sea comes from ship or barge spills. This 2% causes the most harm to wildlife because it is released all at once. More oil gets into the water from natural oil seeps coming from the ocean floor.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html

23) Approximately 23% of energy consumption of the U.S. comes from natural gas. Over 50% of homes in the U.S. use natural gas as their main heating fuel.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/naturalgas.html

24) The U.S. produces over 1/5th of the world's coal.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/coal.html

25) Coal is used to generate more than half of all electricity produced in the U.S.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/coal.html

26) The oil from a single motor change (1 gallon) can ruin the taste of a million gallons of drinking water (1 part per million), the supply of 50 people for one year.
Source: http://www.ciwmb.ca.gov/usedoil/facts.htm

27) In the U.S., less than 60% of used oil is recycled.
Source: http://www.ciwmb.ca.gov/usedoil/facts.htm

28) Oil never wears out, it just gets dirty and can be readily recycled through technology similar to that used to refine crude oil.
Source: http://www.ofee.gov/eo/greening.pdf

29) It takes about a barrel (42 gallons) of crude oil to yield 2.5 quarts of base stock for lubricants. Re-refining just one gallon of used motor oil recovers about the same amount of base stock, 2.5 quarts.
Source: http://www.ofee.gov/eo/greening.pdf

30) The electricity generated by fossil fuels for a single home puts more carbon dioxide in the air than two average cars.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/intro.html

31) Over 90% of the energy used in our homes is produced by burning coal or natural gas.
Source: http://www.ci.boulder.co.us/environmentalaffairs/energy/index.htm

32) Over 95% of Colorado's electricity comes from the most polluting fuel—coal.
Source: http://www.ci.boulder.co.us/environmentalaffairs/energy/electric.htm

Chapter Home

FOOD & COMPOSTING

1) Eighty-nine percent of American households were food secure throughout the entire year in 2003, meaning that they had access, at all times, to enough food for an active, healthy life for all household members.
Source: www.ers.usda.gov

2) 100% of the Great Lakes waters and their connecting waters and 71% of the Nation's coastal waters are under fish consumption advisories.
Source: http://www.epa.gov/waterscience/fish/advisories/factsheet.pdf

3) A ½ acre lawn in New England produces over 3 tons or nearly 260 bags of grass clippings each year.
Source: http://www.mass.gov/dep/consumer/dtg.htm

4) Yard trimmings and food residuals together constitute 23% of the U.S. municipal solid waste stream.
Source: http://www.epa.gov/epaoswer/non-hw/composting/

5) Compost can capture and destroy 99.6% of industrial volatile organic chemicals (VOCs) in contaminated air.
Source: http://www.epa.gov/epaoswer/non-hw/composting/

6) Composting can provide cost savings of at least 50% over conventional soil, water, and air pollution remediation technologies, where applicable.
Source: http://www.epa.gov/epaoswer/non-hw/composting/

7) In 2000, 56.9% of yard trimmings were recovered for composting or “grasscycled”.
Source: http://www.epa.gov/epaoswer/non-hw/composting/basic.htm

8) In 2000, only 2.6% of food waste was composted in the U.S.
Source: http://www.epa.gov/epaoswer/non-hw/composting/basic.htm

9) Composting food scraps results in about a 50% reduction of your original material.
Source: http://www.ciwmb.ca.gov/FoodWaste/Compost/

10) Avenal State Prison in San Joaquin, CA participates in a food composting program that diverts 50% of the facility’s waste from disposal, diverting approximately 480 tons of organic materials from the waste stream annually.
Source: http://www.ciwmb.ca.gov/Publications/default.asp?pubid=977

11) 30-50% of household waste is organic material such as food scraps, leaves, grass clippings, garden waste, and non-recyclable paper.
Source: http://www.gov.ns.ca/enla/waste/docs/WasteResourceStatus2004.pdf

12) Almost 60% of the municipal solid waste produced in the U.S. (including paper) is compostable material.
Source: http://www.epa.gov/epaoswer/non-hw/muncpl/compost.htm

13) The city of Los Angeles diverts approximately 835 cubic yards (CY) of organic material to a demonstration composting facility. Tree and landscape trimmings as well as zoo manure are collected for composting. This has saved L.A. $38 per ton from the cost of hauling organic materials to the landfill, and avoided collection and disposal costs of $172,824 annually.
Source: http://www.ciwmb.ca.gov/publications/Organics/44302020.pdf

14) Through their Griffith Park composting program, the city of Los Angeles has demonstrated that an aerated static pile process (composting) could meet all regulatory requirements within a city of 4 million people without a single nuisance complaint.
Source: http://www.ciwmb.ca.gov/publications/Organics/44302020.pdf

15) Each year California generates over 20 million tons of organic materials, of which about 6-8 million tons are composed and mulched. Out of this, about 1.5 million tons are used as feedstock for the traditional biomass-energy industry.
Source: http://www.ciwmb.ca.gov/Organics/Conversion/

16) California generates 750,000 dry tons of bio-solids every year, of which: 56% are land applied, 16% are composted, 12% are used as alternative daily cover at landfills, 6% are disposed of in landfills, 4% are surface disposed, 8% are incinerated or stored.
Source: http://www.ciwmb.ca.gov/Organics/Biosolids/

17) Plastics represent 8.9% by weight and 17.8% by volume of material disposed in California landfills. This ranks plastics as the second-largest category of waste volume (behind paper) going into municipal landfills.
Source: http://www.ciwmb.ca.gov/publications/Plastics/43203008.pdf

18) If 5% of consumer, retail, and food service food discards from 1995 were recovered, savings from landfill costs alone would be about $50 million annually.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/food/foodmain.pdf

19) Recovering 5% of losses from consumer, retail, and food service discards would represent the equivalent of a day's food for each of 4 million people.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/food/foodmain.pdf

20) Food discards comprise 6.7% by weight of the total U.S. municipal solid waste stream.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/food/foodmain.pdf

21) In 1995, 14 million tons of food discards were generated, of which only 4.1%, 600,000 tons, was diverted or recovered from the traditional disposal destinations of landfills and incinerators.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/food/foodmain.pdf

22) Businesses that recover 50-100% of their food discards can reduce their overall solid waste by 33-85%.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/food/foodmain.pdf

23) Del Mar Fairgrounds in California recovered 51 tons, (75%) of food discards and other organics, and 85% of their total waste stream in 1996.
Source: http://www.epa.gov/epaoswer/non-hw/reduce/food/foodmain.pdf

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GREENHOUSE GASES

1) Buildings in the U.S. contribute 38.1% of the nation's total carbon dioxide emissions, including 20.6% from the residential sector and 17.5 % from the commercial sector.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

2) In 2001, less than 15% of students between the ages of 5-15 walked or biked to or from school, down from 48% of students in 1969.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

3) Levels of several important greenhouse gases have increased by about 25 percent since large-scale industrialization began around 150 years ago.
Source: http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html

4) Scientists recognized in the early 1960s that concentrations of carbon dioxide in the Earth's atmosphere were increasing every year.
Source: http://www.eia.doe.gov/oiaf/1605/gg02rpt/emission.html

5) Water vapor is the most common greenhouse gas in the atmosphere.
Source: http://www.eia.doe.gov/oiaf/1605/gg97rpt/chap1.html

6) The two major greenhouse gases are water vapor and carbon dioxide.
Source: http://www.eia.doe.gov/kids/glossary/index.html#GreenhouseGases

7) The U.S. is the largest single emitter of carbon dioxide from the burning of fossil fuels.
Source: http://www.cia.gov/cia/publications/factbook/geos/us.html

8) In the U.S., approximately 6.6 tons of greenhouse gases are emitted per person every year. Most of these emissions, about 82%, are from burning fossil fuels to generate electricity and power our cars.
Source: http://yosemite.epa.gov/oar/globalwarming.nsf/content/emissionsindividual.html

9) In 1995, the U.S. emitted more greenhouse gases per person than any other country in the world. Closely following the U.S. were Australia, Canada, and New Zealand.
Source: http://yosemite.epa.gov/oar/globalwarming.nsf/content/emissionsindividual.html

10) As an individual, you can affect the emissions of about 4,800 pounds of carbon equivalent, or nearly 32% of the total emissions per person, by the choices you make in three areas of your life. These are the electricity used in your home, the waste you produce, and personal transportation. The other 68% of emissions are affected more by the types of industries in the U.S.
Source: http://yosemite.epa.gov/oar/globalwarming.nsf/content/emissionsindividual.html

11) The U.S. releases one fourth of the 20 billion tons of carbon dioxide emitted into the atmosphere each year.
Source: www.ciwmb.ca.gov/GreenBuilding/Residential/

12) In September of 2004, the EPA reported that America's air is cleanest it has been in three decades.
Source:
http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/d13d7cbd4048f16e85256f1700536aaf!OpenDocument

13) In 2000, residences accounted for 20% of U.S. energy-related carbon dioxide emissions—that's 313.4 million metric tons of carbon dioxide.
Source: http://www.eere.energy.gov/buildings/info/homes/index.html

14) Plant respiration and the decomposition of organic matter release more than 10 times the CO2 released by human activities.
Source: http://yosemite.epa.gov/OAR/globalwarming.nsf/content/Climate.html

15) In 1997, the U.S. emitted about one fifth of total global greenhouse gases.
Source: http://yosemite.epa.gov/OAR/globalwarming.nsf/content/Climate.html

16) Greenhouse gases trap heat in the atmosphere. Methane traps over 21 times more heat per molecule than carbon dioxide, and nitrous oxide absorbs 270 times more heat per molecule than carbon dioxide.
Source: http://yosemite.epa.gov/OAR/globalwarming.nsf/content/Climate.html

17) If the TV's, VCR, DVD, and telephones were replaced with Energy Star models, it would save over 20 billion pounds of greenhouse gas emissions, the equivalent to taking 1.5 million cars off the road.
Source:
http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductCategory&pcw_code=HEF

18) During the past 20 years, about three quarters of human-made carbon dioxide emissions were from burning fossil fuels.
Source: http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html

19) Developing countries' emissions of carbon dioxide are expected to grow above the world average at 2.7% annually between 2001 and 2025; and surpass emissions of industrialized countries near 2018.
Source: http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html

20) World carbon dioxide emissions are expected to increase by 1.9% annually between 2001 and 2025.
Source: http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html

21) The U.S. is projected to lower its carbon intensity by 25% from 2001 to 2025, and remain below world average.
Source: http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html

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LANDSCAPING

1) In the U.S. alone, pavements and other impervious surfaces cover over 43,000 square miles, about the size of Ohio.
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

2) Parking lots of demonstrated buildups of nitrogen oxides, rubber from tires, phosphates from residential and agricultural sources, and dozens of other pollutants.
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

3) Gas powered garden tools emit 5% of the nation's air pollution.
Source: http://www.epa.gov/greenacres/nativeplants/factsht.html

4) One gas-powered lawnmower emits 11 times the air pollution of a new car for each hour of operation.
Source: http://www.epa.gov/greenacres/nativeplants/factsht.html

5) In the U.S., approximately 20 million acres of lawn are cultivated, covering more land than any single crop.
Source: http://www.epa.gov/greenacres/nativeplants/factsht.html

6) Carefully positioned trees can save up to 25% of a typical household's energy for heating and cooling.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/landscaping.html

7) Studies conducted by the Lawrence Berkeley National Laboratory found summer daytime air temperatures to be 3-6 degrees F cooler in tree-shaded neighborhoods than in treeless areas.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/landscaping.html

8) On average, a well-designed landscape provides enough energy savings to return your initial investment in less than 8 years.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

9) Because cool air settles near the ground, air temperatures directly under trees can be as much as 25 degrees F cooler than air temperature above nearby blacktop.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

10) A well-planned landscape can reduce an unshaded home's summer air-conditioning costs by 15 to 50%. One Pennsylvania study reported air-conditioning savings of as much as 75% for small mobile homes.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

11) A study in South Dakota found that windbreaks to the north, west, and east of houses cut fuel consumption by an average of 40%.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

12) A grass-covered lawn is usually 10 degrees F cooler than bare ground in the summer.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

13) On average, landscaping for energy efficiency provides enough energy savings to return an initial investment in less than 8 years.
Source: http://www.eere.energy.gov/consumer/your_home/landscaping/index.cfm/mytopic=11910

14) A windbreak will reduce wind speed for a distance as much as 30 times the windbreak's height.
Source: http://www.eere.energy.gov/consumer/your_home/landscaping/index.cfm/mytopic=11950

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LIGHTING

1) Lighting can account for 7% of the energy used in the average residence.
Source: http://www.energystar.gov/index.cfm?c=products.pr_pie

2) Compact fluorescent lamps (CFLs) use 66% less energy than incandescents, and provide the same amount of illumination.
Source: http://www.ornl.gov/sci/eere/buildings/SSL_Final_June_2004.pdf

3) 95% of energy used in an incandescent light bulb is converted to heat.
Source: http://www.energystar.gov/ia/new_homes/features/HighELighting1-17-01.pdf

4) If every American changed out their 5 most frequently used light fixtures or the bulbs in them to Energy Star qualified lighting, each family would save $60 every year in energy costs, and together could keep more than one trillion pounds of greenhouse gases out of the air. That's a $6 billion energy savings for Americans equivalent to the annual output of more than 21 power plants.
Source: http://www.energystar.gov/index.cfm?c=lighting.pr_lighting

5) The five highest-use fixtures in a home are typically the kitchen ceiling light, the living room table and floor lamps, bathroom vanity, and outdoor porch or post lamp.
Source:
http://www.energystar.gov/index.cfm?c=lighting.pr_lightinghttp://www.energystar.gov/index.cfm?c=lighting.pr_lighting

6) Energy Star qualified lighting uses 2/3 less energy than traditional lighting products and lasts 6-10 times longer.
Source: http://www.energystar.gov/index.cfm?c=lighting.pr_lighting

7) If you replace 25% of your lights in high-use areas with fluorescents, you can save about 50% of your lighting energy bill.
Source: http://www.eere.energy.gov/buildings/info/homes/index.html

8) If every household in the U.S. replaced one light bulb with an Energy Star qualified compact fluorescent light bulb (CFL), it would prevent enough pollution to equal removing one million cars from the road.
Source: http://www.energystar.gov/index.cfm?c=cfls.pr_cfls

9) Replacing a 100-watt incandescent bulb with a 32-watt CFL can save at least $30 in energy costs over the life of the bulb.
Source: http://www.energystar.gov/index.cfm?c=cfls.pr_cfls

10) More energy is used overall to light a home than to run a refrigerator 24 hours a day.
Source: http://www.energystar.gov/index.cfm?c=fixtures.alp_consumers

PASSIVE HEATING AND COOLING

1) About a third of the unwanted heat that builds up in a home comes in through the roof.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

2) Unlike most light-colored surfaces, even white asphalt and fiberglass shingles absorb 70% of solar radiation.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

3) A reflective heat barrier can reduce heat gains through your ceiling by about 25%.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

4) Roughly 40% of the unwanted heat that builds up in a home comes in through windows.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

5) Shading your home can reduce indoor temperatures by as much as 20 degrees F.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

6) A properly installed awning can reduce heat gain up to 65% on southern windows and 77% on eastern windows.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

7) A well-insulated house will gain only 1 degree F per hour if the outside temperature is 85 to 90 degrees F.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

8) The typical home loses more than 25% of its heat through windows.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/eehouse.html

9) Good air sealing alone may reduce utility costs by as much as 50% when compared to other houses of the same type and age.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/eehouse.html

10) Light colored materials and coatings (paint) on the exterior siding and roof can help reduce cooling requirements by up to 15%.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/eehouse.html

11) Medium-colored draperies with white-plastic backings have been found to reduce heat gains by 33%.
Source:
http://www.eere.energy.gov/consumer/your_home/windows_doors_skylights/index.cfm/mytopic=13530

12) When drawn during cold weather, most conventional draperies can reduce heat loss from a warm room up to 10%.
Source:
http://www.eere.energy.gov/consumer/your_home/windows_doors_skylights/index.cfm/mytopic=13530

13) Heat travels through a masonry wall at an average rate of one hour per inch.
Source:
http://www.eere.energy.gov/consumer/your_home/designing_remodeling/index.cfm/mytopic=10300

14) Gaps and compressed areas of insulation can cut the energy-saving potential of insulation by over 25%.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

15) Window orientation affects energy use by as much as 25% for some designs.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

16) In most sections of the U.S., insulating the exterior edge of the slab (on-grade) of a residential building can reduce winter heating bills by 10-20%.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/29237.pdf

17) Low-e windows can block up 98% of UV radiation from the sun.
Source: http://www.energystar.gov/ia/new_homes/features/HighPerformanceWindows1-17-01.pdf

18) In cold climates, windows can be responsible for 10-25% of a home's heat loss during the winter and heat gain during the summer.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/window_selection-777.pdf

POPULATION, AREA, AND GENERAL FACTS

1) The U.S. makes up 4.6% of the world's population.
Source: http://www.census.gov/main/www/popcld.html

2) As of July 2005, U.S. population is 296,000,000
Source: www.census.gov/main/www/popcld.html

3) World population is 6.45 billion.
Source: http://www.census.gov/main/www/popcld.html

4) As of July 2005, E.U. population is 456,900,000
Source: http://www.cia.gov/cia/publications/factbook/geos/ee.html

5) The European Union covers less than 4 billion sq kilometers, a little less than half the size of the U.S.
Source: http://www.cia.gov/cia/publications/factbook/geos/ee.html

6) The U.S. territories total 9.6 billion sq kilometers.
Source: http://www.cia.gov/cia/publications/factbook/geos/us.html

7) The population of California is 35,484,453 as of 2003 estimates.
Source: http://quickfacts.census.gov/qfd/states/06000.html

8) There are more than 76 million residential buildings and nearly 5 million commercial buildings in the U.S. By 2010, another 38 million buildings are expected to be constructed.
Source: http://www.sustainable.doe.gov/buildings/gbintro.shtml

9) The U.S. has almost 3 million sq km of forestland, with over one million sq km owned by the Federal Government.
Source: http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

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SOLAR POWER

1) Individual grid-connected photovoltaic installations are expected to grow rapidly, from 60 megawatts in 2003 to 1,800 megawatts in 2025.
Source: http://www.eia.doe.gov/oiaf/aeo/electricity.html

2) Insolation is the amount of solar energy received on a given area over time measured in kilowatt-hours per square meter (kwh/m^2) - this value is equivalent to "peak sun hours".
Source:
http://www.eere.energy.gov/solar/cfm/faqs/third_level.cfm/name=Photovoltaics/cat=The%20Basics

3) Monthly average energy consumption for an average household was 866 kilowatt hours
Source: http://www.doe.gov/engine/content.do?BT_CODE=EDG1760

4) Solar panels should last over 20 years; the first one built in 1954 is still running.
Source: http://www.doe.gov/engine/content.do?BT_CODE=SOLAR

5) The basic PV module (interconnected, enclosed panel of PV cells) has no moving parts and can last more than 30 years.
http://www.eere.energy.gov/solar/cfm/faqs/third_level.cfm/name=Photovoltaics/cat=The%20Basics

6) The sun's energy hitting the surface of the planet is about 1 kilowatt per square meter.
Source: http://www.doe.gov/engine/content.do?BT_CODE=SOLAR

7) The most efficient solar panels today run at about 20% efficiency, while average is 15%
Source: http://www.doe.gov/engine/content.do?BT_CODE=SOLAR

8) In 1954 Bell labs developed the first solar cell. It had an efficiency of 6%, and is still running today
Source: http://www.eia.doe.gov/cneaf/solar.renewables/rea_issues/solar.html

9) PV cells are typically combined into modules that hold about 40 cells. About 10 of these modules are mounted in PV arrays.
Source: http://www.eere.energy.gov/RE/solar_basics.html

10) PV modules covering an area about 110 miles by 110 miles of the land in the United States, one-third the land occupied by roadways, could supply all the electricity consumed here.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

11) In 2000, PV systems generated 844 million kilowatt-hours of electricity.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

12) The PV systems installed since 1988 provide enough electricity to power 250,000 American homes or more than 8 million homes in the developing world.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

13) PV module production has increased more than thirteen-fold since 1989. Worldwide PV module shipments in 2002 were 560 megawatts (MW). The United States shipped 120 MW.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

14) The cost of larger PV systems (greater than 1 kW) is measured in "levelized" costs per kWh—the costs are spread out over the system lifetime and divided by kWh output. The levelized cost is now around 30 cents/kWh. At this price, PV is cost effective for residential customers located farther than a quarter of a mile from the nearest utility line. Reliability and lifetime are steadily improving; PV manufacturers guarantee their products for up to 25 years.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

15) The worldwide PV industry has grown from sales of less than $2 million in 1975 to greater than about $2 billion in 2001.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

16) Around 70% of U.S. solar cell production is exported, mostly to developing countries where 2 billion people still live without electricity.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

17) Since the inception of the U.S. Department of Energy's National Photovoltaics R&D Program, thin films, one of our solar cell materials, have seen a steady rise in conversion efficiencies. Today's conversion efficiencies, the amount of sunlight turned into electricity, have reached 18.8% for CIS cells, 15.8% for CdTe cells, and greater than 12% for a-Si cells.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

18) In 2001 PV module shipments jumped to almost 400 megawatts, which represents about a $2.5 to $3 billion dollar market.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

19) As of 1998, the PV industry creates about 3000 direct and indirect jobs for every $100 million of module sales.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

20) A residential energy system typically costs about $8-10 per Watt. Where government incentive programs exist, together with lower prices secured through volume purchases, installed costs as low as $3-4 watt—or some 10-12 cents per kilowatt-hour can be achieved.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

21) The largest commercial PV installation in the U.S. as of 2003 is 3.4 MW for Tucson Electric Power in Tucson, Arizona.
Source: www.eere.energy.gov/solar/pv_quick_facts.html#1

22) Solar panels power nearly every satellite circling the Earth.
Source: http://www.nrel.gov/docs/fy99osti/26242.pdf

23) Of the 13 known solar electric generating units producing more than 1MW of electricity operating in the U.S. at the end of 2002, 11 are in California and 2 are in Arizona.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/solar.html

24) California solar electric facilities produce more than 99% of the commercially available solar generated electric power in the U.S.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/solar.html

25) Currently, 48 states and a U.S. territory have some type of solar or renewable incentive-including investment credits, rebates, sales tax, or property tax waivers.
Source: http://www.eere.energy.gov/solar/pv_quick_facts.html#1

26) An acre of photovoltaic panels on top of the California Franchise Tax Board Butterfield State Office building supplies nearly half a megawatt (470 kW) of electricity, or enough to power more than 400 homes in the Sacramento area.
Source: http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/2003/Document.pdf

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TRANSPORTATION

1) As an individual, you can affect the emissions of about 4,800 pounds of carbon equivalent, or nearly 32% of the total emissions per person, by the choices you make in three areas of your life. These are the electricity used in your home, the waste you produce, and personal transportation. The other 68% of emissions are affected more by the types of industries in the U.S.
Source: http://yosemite.epa.gov/oar/globalwarming.nsf/content/emissionsindividual.html

2) Between 1985/86 and 2002/2003, there were large increases in the average numbers of trips per person made as a car driver (up 65%) or as a car passenger (up 33%), and large falls for walking (down 33%) and local bus (down 31%).
Source: http://www.scotland.gov.uk/Publications/2005/04/1894658/46593

3) Between 1985/86 and 2002/2003, the average distance traveled per person rose by 67% for shopping trips, by 81% for other personal business, by 26% for commuting and by 60% for holidays and day trips.
Source: http://www.scotland.gov.uk/Publications/2005/04/1894658/46593

4) 90% of badly polluting vehicles can be re-tuned within 15 minutes.
Source: http://www.devon.gov.uk/index/transport/green_travel/travel_awareness/cars.htm

5) Emissions from road transport now constitute over 70% of all emissions of Carbon Monoxide (CO).
Source: http://www.worcestershire.gov.uk/home/wccindex/wcc-transport/wcc-transport-travel-wise/wcc-transport-travel-wise-media-facthealth.htm

6) The U.S. government offers tax incentives of up to $2,000 for hybrid vehicles, $4,000 for electric vehicles, and $25,000 for a business owned vehicle.
Source: www.fueleconomy.gov

7) In 2003, airline traffic accounted for over 17 billions gallons of fuel at a price of 85 cents a gallon. In 2002 prices were 71 cents a gallon, and in 2004 prices were 97 cents a gallon.
Source: http://www.bts.gov/xml/fuel/report/src/index.xml

8) About 3.3 million Americans travel 50 miles or more one way to get to work- and they commute these distances 329 million times a year.
Source: http://www.bts.gov/press_releases/2004/bts010_04/html/bts010_04.html

9) Drivers in the Los Angeles area spend on average, 50 hours a year stuck in traffic.
Source:
http://www.bts.gov/publications/national_transportation_statistics/2005/html/table_01_63.html

10) In 2003, U.S. drivers covered over 2.89 quadrillion (1,000 billion) miles, consuming 169 trillion gallons of gas.
Source:
http://www.bts.gov/publications/national_transportation_statistics/2005/html/table_04_09_m.html

Facts 11 and 12 are based on an average annual passenger car mileage of 12,500 miles and average fuel consumption of 21.5 miles per gallon. Light trucks are based on 14,000 miles per year, and an average of 17.2 mpg fuel consumption.
Source: http://www.epa.gov/otaq/consumer/f00013.htm

11) According to the U.S. Dept of Energy and the EPA, the average passenger car in the U.S. consumes 581 gallons of gas per year, emitting 77.1 pounds of hydrocarbons, 575 pounds of carbon monoxide, 38.2 pounds of oxides of nitrogen, and 11,450 pounds of carbon dioxide.
Source: http://www.epa.gov/otaq/consumer/f00013.htm

12) The average light truck in the U.S. consumes 813 gallons of gasoline, emitting 108 pounds of hydrocarbons, 854 pounds of carbon monoxide, 55.8 pounds of oxides of nitrogen, and 16,305 pounds of carbon dioxide.
Source: http://www.epa.gov/otaq/consumer/f00013.htm

13) Carbon dioxide emissions are directly related to the U.S. economy; each 1% increase (decrease) in fuel consumption results in a corresponding 1% increase (decrease) in carbon dioxide emissions.
Source: http://www.epa.gov/otaq/consumer/f00013.htm

14) Mile for mile, most emissions from a car trip occur in the first 15 minutes a car is running—the time when the emissions control devices are not fully warmed up.
Source: http://www.epa.gov/otaq/transp/42097021.pdf

15) Gas mileage is improved by about 15% by driving at 55 mph rather than 65 mph.
Source: http://www.epa.gov/otaq/consumer/17-tips.pdf

16) Non-road diesel equipment accounts for one-fifth of Nox emissions and almost half the PM (Particulate Matter) emissions from diesel nationwide.
Source: http://www.nyc.gov/html/ddc/html/ddcgreen/documents/lowsulfur.pdf

17) You can improve your gas mileage up to 5% around town if you avoid “jackrabbit” starts and stops.
Source: http://www.ftc.gov/bcp/conline/pubs/alerts/fuelalrt.htm

18) An extra 100 lbs in the trunk of a typical car can reduce its fuel economy by up to 2 percent.
Source: http://www.ftc.gov/bcp/conline/pubs/alerts/fuelalrt.htm

19) A loaded roof rack or carrier creates wind resistance and can decrease fuel economy by 5 percent.
Source: http://www.ftc.gov/bcp/conline/pubs/alerts/fuelalrt.htm

20) Keeping your engine tuned according to your owner’s manual can increase gas mileage by an average of 4 percent.
Source: http://www.ftc.gov/bcp/conline/pubs/alerts/fuelalrt.htm

21) Keeping your tires properly inflated and aligned can increase gas mileage up to 3 percent.
Source: http://www.ftc.gov/bcp/conline/pubs/alerts/fuelalrt.htm

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TREES & GLOBAL WARMING

1) Studies conducted by the Lawrence Berkeley National Laboratory found summer daytime air temperatures to be 3-6 degrees F cooler in tree-shaded neighborhoods than in treeless areas.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/landscaping.html

2) One mature tree in a riparian area can filter as much as 200 pounds of nitrates runoff per year.
Source: http://www.nps.gov/rivers/waterfacts.html

3) Carefully positioned trees can save up to 25% of a typical household's energy for heating and cooling.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/landscaping.html

4) Studies conducted by the Lawrence Berkeley National Laboratory found summer daytime air temperatures to be 3-6 degrees F cooler in tree-shaded neighborhoods than in treeless areas.
Source: http://www.eere.energy.gov/consumerinfo/energy_savers/landscaping.html

5) Because cool air settles near the ground, air temperatures directly under trees can be as much as 25 degrees F cooler than air temperature above nearby blacktop.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

6) Trees and vegetation control erosion, protect water supplies, provide food, create habitat for wildlife, and clean the air by absorbing CO2 and releasing O2.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

7) The National Academy of Sciences (NAS) estimates that urban America has 100 million potential tree spaces (i.e., spaces where trees could be planted). NAS further estimates that filling these spaces with trees and lightening the color of dark, urban surfaces would result in annual energy savings of 50 billion kilowatt-hours—25% of the 200 billion kilowatt-hours consumed every year by air conditioners in the United States. This would reduce electric power plant emissions of carbon dioxide by 35 million tons (32 million metric tons) annually and save users of utility-supplied electricity $3.5 billion each year (assuming an average of $0.07 per kilowatt-hour).
Source: http://www.eere.energy.gov/consumerinfo/factsheets/landscape.html

8) The U.S. has almost 3 million sq km of forestland, with over one million sq km owned by the Federal Government.
Source: http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

9) Two-thirds of U.S. forestlands, or almost 490 million acres, are classified as timberlands, used for the production of commercial wood products.
Source: http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

10) Seventy percent of U.S. timberland is located in the East.
Source: http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

11) The forest products industry owns about 70 million acres, or 14%, of commercial timberland, harvesting one third of the nation's annual timber.
Source:
http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figureshttp://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

12) The U.S. is the world's leading producer and consumer of forest products, and accounts for about one-fourth of the world's production and consumption.
Source: http://www.epa.gov/agriculture/forestry.html#Facts%20and%20Figures

13) According to the National Academy of Sciences, the Earth's surface temperature has risen by about 1 degree Fahrenheit in the past century, with accelerated warming during the past two decades.
Source: http://yosemite.epa.gov/OAR/globalwarming.nsf/content/Climate.html

14) Besides providing shade, trees and vines create a cool microclimate that dramatically reduces the temperature (by as much as 9 degrees F) in the surrounding area.
Source: http://www.eere.energy.gov/consumerinfo/factsheets/coolhome.html

15) If you have an air conditioner, shading a unit (with a tree) can increase its efficiency by as much as 10%.
Source: http://www.eere.energy.gov/consumer/your_home/landscaping/index.cfm/mytopic=11940

VENTILATION

1) On average, Americans spend about 90% or more of their time indoors.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

2) Indoor levels of pollutants may be 2-5 times higher, and occasionally more than 100 times higher, than outdoor levels.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

3) In the mid 1990s, 1 in 5 U.S. schools reported unsatisfactory indoor air quality, and 1 in 4 schools reported ventilation as unsatisfactory.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

4) In 1992, the EPA estimated that nearly one out of every 15 homes had radon concentrations above the recommended EPA action level.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

5) Radon is the second leading cause of lung cancer and is estimated to be responsible for 21,000 deaths per year.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

6) Inadequate or improper ventilation is the cause of about half of all Indoor Air Quality problems in non-industrial workplaces.
Source: http://www.osha.gov/SLTC/ventilation/

7) A committee of the World Health Organization estimates that as many as 30 percent of new or remodeled buildings may have unusually high rates of sick building complaints.
Source: http://www.epa.gov/iaq/pubs/ventilat.html

8) Energy Star qualified fans use 65% less energy, on average, than standard models.
Source: http://www.energystar.gov/index.cfm?c=vent_fans.pr_vent_fans

9) A whole house fan can cost less than a third of a window unit air conditioner.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26291.pdf

10) The efficiency of air distribution systems has been found to be 60-75% or less in many houses because of insufficient and/or poorly installed duct insulation and leaks in the duct system.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/air_dist_sys_design-0782.pdf

11) Properly designed and installed duct systems can have efficiencies of 80% or more for little or no additional cost, potentially saving $50-200 or more per year in heating and cooling costs.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/air_dist_sys_design-0782.pdf

12) The cost of moving ducts into conditioned space can be offset by smaller heating and cooling equipment, smaller and less duct work, reduced duct insulation, and lower operating costs.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/air_dist_sys_design-0782.pdf

13) Air infiltration can account for 30% or more of a home's heating and cooling costs and contribute to problems with moisture, noise, dust, and the entry of pollutants, insects, and rodents.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26448.pdf

14) A ¼" gap around the perimeter of an attic access door can potentially leak the same amount of air supplied by a typical bedroom heating duct (~100 CFM).
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26447.pdf

15) Excess air leakage in homes can increase heating and cooling bills by 30%.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26290.pdf

16) The cracks in ductwork typically have an area that is 10-20% of the leakage area of that house.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/27630.pdf

WATER INSIDE/GENERAL FACTS

1) An acre-foot of water equals 325,900 gallons.

2) 1 inch of rain on a 1,000 sq ft roof produces 623 gallons (1 inch of rain on one square foot equals about a half-gallon)

3) San Diego County average rainfall is 9.9 inches per year, so on a 2,000 sq ft roof a San Diego resident could save over 12,000 gallons of water per year
Source: http://www.wrh.noaa.gov/sgx/climate/san-san.htm

4) One person uses over 100 gallons per day
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

5) A toilet uses 2-7 gallons per flush
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

6) An average five-minute shower uses 15-25 gallons
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

7) A dishwasher uses 9-12 gallons.
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

8) Hand washing uses 9-20 gallons.
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

9) A garden hose can pour out 600 gallons in only a few hours
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

10) One drip per second wastes over 2,700 gallons a year.
Source: http://www.seminolecountyfl.gov/envsrvs/watercon/faq.asp?itemID=341

11) A running tap can waste almost 4 gallons a minute.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/pollution/pg_water_page.htm

12) Most conventional washing machines use 25-40 gallons of water per complete cycle.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

13) A water-efficient washing machine uses between 12-16 gallons.
Source: Industry comparison

14) A full load in the washing machine uses less water than two half loads.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/pollution/pg_water_page.htm

15) The average family uses the equivalent of two baths of water per day when flushing the toilet.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/pollution/pg_water_page.htm

16) Taking showers and not baths can save enough water for 1,000 cups of tea a week
Source: http://www.eastrenfrewshire.gov.uk/index/environment/pollution/pg_water_page.htm

17) One third of a family's water is flushed down the toilet.
Source: http://www.eastrenfrewshire.gov.uk/index/environment/pollution/pg_water_page.htm

18) Running the water while you brush your teeth or shave can waste over a gallon a minute
Source: http://www.eastrenfrewshire.gov.uk/index/environment/pollution/pg_water_page.htm

19) To maintain current drinking water standards, community water providers will need to invest an estimated $276.8 billion between 2003 and 2023. The majority of those dollars will go towards transmission and distribution of water.
Source: http://www.epa.gov/safewater/needssurvey/index.html

20) Building occupants use 12.2 percent of total water consumed in the U.S. per day. Of that total, 25.6% is used by commercial buildings, and 74.4% by homeowners.
Source: http://www.epa.gov/greenbuilding/gbstats.pdf

21) A leak of one drip per second can cost $1 a month.
Source: http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=13050

22) Efficient models of dishwashers can use an average of 5.8 gallons of water per load, compared with 6.8 gallons of water for hand-washing the same load.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

23) Horizontal-axis washing machines typically use one-third the water of a conventional machine to wash the same amount of clothes.
Source: http://www.eere.energy.gov/buildings/info/documents/pdfs/26468.pdf

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WATER OUTSIDE

1) In half an hour, a garden sprinkler uses as much water as a family of four in a day.
Source: http://www.hillingdon.gov.uk/environment/la21/facts.php

2) A garden hose can pour out 600 gallons in only a few hours.
Source: http://www.seminolecountyfl.gov/envsrvs/watercon/faq.asp?itemID=341

3) Nonpoint source of pollution (NPS, or pollution coming from diffuse sources, like many homes in a neighborhood after a rainfall) is the leading U.S. cause of water quality degradation.
Source: http://www.epa.gov/owow/nps/qa.html

4) 97% of the earth's water is in the ocean
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

5) 2% of the earth's water is frozen in the ice caps
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

6) 1% of the earth's water is drinkable
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

7) A dairy cow must drink four gallons of water to produce one gallon of milk.
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

8) 1 orange takes 13.8 gallons of water to grow.
Source: www.epa.gov/safewater/kids/water_trivia_facts.html

9) Irrigation and thermal electric generation account for approximately 77% of U.S. freshwater use.
Source: www.eere.energy.gov/windandhydro/windpoweringamerica/pdfs/wpa/wpa_factsheet_series.pdf

10) 1/5th of the world's freshwater is in the Great Lakes
Source: http://www.glerl.noaa.gov/res/Task_rpts/1998/ccquinn11-1.html

11) Watershed imperviousness exceeding 15% makes it impossible to rate streams "good" according to Maryland DNR.
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

12) 2% watershed imperviousness can affect pollution sensitive species such as brook trout
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

13) Rainfall hitting "heat islands" can raise the temperature of runoff water by 10 degrees F, which can kill off entire heat sensitive populations in a cold-water stream.
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

14) Pervious, or porous surfaces that are much better for the environment include open-jointed pavers, soft materials such as wood chips or crushed shells, traditional decking, porous concrete.
Source: http://ehp.niehs.nih.gov/members/2005/113-7/ehp0113-a00456.pdf

15) Ground water is the source of about 37 percent of the water that county and city water departments supply to households and businesses (public supply).
Source: http://interactive2.usgs.gov/faq/list_faq_by_category/get_answer.asp?id=57

16) About 42 percent of the water used for irrigation comes from ground water.
Source: http://interactive2.usgs.gov/faq/list_faq_by_category/get_answer.asp?id=57

17) Reclaimed wastewater is most often used for irrigation and for water parks and golf courses. In the U.S. in 1995 about 44,400 wastewater-treatment plants sent about 44,600 million gallons per day of treated water back into the environment. About 983 million gallons per day was used again (reclaimed) after treatment, mainly as irrigation water.
Source: http://interactive2.usgs.gov/faq/list_faq_by_category/get_answer.asp?id=57

18) The earth is estimated to hold about 1,460,000,000 cubic kilometers of water. The breakdown of where all that water resides is estimated as follows:
Oceans (saline): 1,419,120,000 cubic kilometers
Ice caps and glaciers (fresh): 31,244,000 cubic kilometers
Ground water (fresh and saline): 8,906,000 cubic kilometers
Streams and lakes (fresh): 132,860 cubic kilometers
Lakes (saline): 116,800 cubic kilometers
Other--soil, atmosphere, biosphere (fresh): 480,340 cubic kilometers
Source: http://interactive2.usgs.gov/faq/list_faq_by_category/get_answer.asp?id=269

19) It takes approximately one gallon of water to process a quarter pound of hamburger.
Source: http://www.epa.gov/OGWDW/kids/water_trivia_facts.html

20) It takes 62,600 gallons of water (or over 260 tons) to produce one ton of steel.
Source: http://www.epa.gov/OGWDW/kids/water_trivia_facts.html

21) A five-minute shower uses, on average, between 15-25 gallons. Hand washing dishes uses 9-20 gallons, and using a dishwasher uses 9-12 gallons.
Source: http://www.epa.gov/OGWDW/kids/water_trivia_facts.html

22) 400 gallons of water is used in the growing and production of one chicken, and 120 gallons is used to produce one egg.
Source: http://www.epa.gov/OGWDW/kids/water_trivia_facts.html

23) The oil from a single motor change (1 gallon) can ruin the taste of a million gallons of drinking water (1 part per million), the supply of 50 people for one year.
Source: http://www.ciwmb.ca.gov/usedoil/facts.htm

24) Approximately 80% of the earth's surface is water.
Source: http://www.epa.gov/safewater/kids/water_trivia_facts.html

25) Water utilities process 38 billion gallons of water per day at a cost of $3.5 billion annually.
Source: http://www.epa.gov/safewater/kids/water_trivia_facts.html

26) If all the world's water were fit into a gallon jug, the fresh water available for us to use would equal only about a teaspoon.
Source: http://www.nps.gov/rivers/waterfacts.html

27) The cost of desalinization, or “de-salting” seawater ranges from $1-$16 per 1000 gallons.
Source: http://www.nps.gov/rivers/waterfacts.html
28) The United States consumes water at twice the rate of other industrialized nations.
Source: http://www.nps.gov/rivers/waterfacts.html

29) Most of the world’s people must walk at least 3 hours to fetch water.
Source: http://www.nps.gov/rivers/waterfacts.html

30) During the 20th century, water use increased at double the rate of population growth; while the population tripled, water use per capita increased by six times.
Source: http://www.nps.gov/rivers/waterfacts.html

31) On a global average, most freshwater withdrawals—69%--are used for agriculture, while industry accounts for 23% and municipal use (drinking water, bathing and cleaning, and watering plants) just 8%.
Source: http://www.nps.gov/rivers/waterfacts.html

32) A cornfield of one acre gives off 4,000 gallons of water per day in evaporation.
Source: http://www.nps.gov/rivers/waterfacts.html

33) About 6,800 gallons is required to grow a day’s food for a family of four.
Source: http://www.nps.gov/rivers/waterfacts.html

34) About 39,000 gallons of water is needed to make an automobile, tires included.
Source: http://www.nps.gov/rivers/waterfacts.html

35) The 48 continental United States receive enough precipitation in one year to cover the land to a depth of 30 inches. That works out to about 1,430 cubic miles of water, which would have a weight (at 62.4 pounds per cubic foot) of about 6.6 billion tons.
Source: http://ga.water.usgs.gov/edu/earthrain.html

38) One inch of rain falling on an area 100’x 50’ and average urban house lot would produce enough water for 62 x 50 gallon baths.
Source: http://ga2.er.usgs.gov/edunew/sc2action.cfm

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WIND POWER

1) Wind powered generating capacity is expected to increase from 6.6 gigawatts in 2003 to 11.3 gigawatts in 2025.
Source: http://www.eia.doe.gov/oiaf/aeo/electricity.html

2) A small wind turbine can cost anywhere from $3,000-$50,000 installed.
Source: www.nrel.gov/docs/fy05osti/37633.pdf

3) One megawatt of wind capacity is enough to power 240-300 average American homes.
Source: http://www.nrel.gov/wind/consumers.html

4) The world's winds could supply more than 10 times the current total world energy demand.
Source: http://www.nrel.gov/wind/consumers.html

5) Good wind areas, which cover 6% of the contiguous U.S. land area, have the potential to supply more than one and a half times the current electricity consumption of the United States.
Source: www.eere.energy.gov/windandhydro/wind_potential.html

6) Wind power with today's technology could supply 20% of the United States' electricity.
Source: www.eere.energy.gov/windandhydro/wind_potential.html

7) In the United States, wind energy contributed more than 3.5 billion kilowatt-hours (kWh) of electricity last year.
Source: http://www.nrel.gov/wind/windfact.html

8) On wind farms, wind turbines occupy only about 5% of the land, leaving the rest available for other uses.
Source: http://www.nrel.gov/wind/windfact.html

9) The state of North Dakota alone has enough energy from good wind areas to supply 36% of the 1990 electricity consumption in the lower 48 states.
http://www.nrel.gov/wind/windfact.html

10) Wind energy provides 40-160 construction jobs and 10-25 operations and maintenance jobs per 100 MW.
Source: www.eere.energy.gov/windandhydro/windpoweringamerica/pdfs/wpa/wpa_factsheet_series.pdf

11) Most small wind turbines make less noise than a residential air conditioner.
Source: http://www.gov.on.ca/OMAFRA/english/engineer/facts/03-047.htm#noise

12) Large modern turbines are very quiet. At distances of more than 650 feet, the swishing sound of the rotor blades is usually masked completely by wind noise in the leaves of trees or shrubs.
Source: http://www.tva.gov/greenpowerswitch/wind_faq.htm#7

13) The U.S. has more than 6,300 megawatts of wind generating capacity.
http://www.eere.energy.gov/windandhydro/

14) A single utility-scale (750 kW) wind turbine can prevent the emission of 5000 tons of carbon dioxide (CO_2) into the atmosphere each year. It would take 500 acres of forest to absorb that much CO_2.
Source: http://www.nrel.gov/wind/consumers.html

15) California wind plants effectively save the energy equivalent of 4.8 million barrels of oil per year.
Source: http://www.nrel.gov/wind/consumers.html

16) Wind energy provides more jobs per dollar invested than any other energy technology.
Source: http://www.nrel.gov/wind/consumers.html

17) On an average wind farm where land is leased, each 1.5MW turbine can produce between $4-6,000 of passive income for the landowner per year, all while allowing him to use almost 100% of his land. An average wind farm can cover 6,400 acres and consist of 30-50 turbines.
Source: http://www.mah.gov.on.ca/userfiles/HTML/nts_1_12323_1.html

18) Wind turbines are less hazardous to birds than high-rise buildings, automobiles, transmission lines and pet cats.
Source: http://www.mah.gov.on.ca/userfiles/HTML/nts_1_12323_1.html

19) Ambient noise from passing cars or rustling leaves is often greater than the sound of a wind turbine.
Source: http://www.mah.gov.on.ca/userfiles/HTML/nts_1_12323_1.html

20) In the year 2004, wind energy in California produced 4,258 million kilowatt-hours of electricity, about 1.5 percent of the state's total electricity.
Source: http://www.energy.ca.gov/wind/overview.html

21) More than 13,000 of California's wind turbines, or 95 percent of all of California's wind generating capacity and output, are located in three primary regions: Altamont Pass (east of San Francisco), Tehachapi (south east of Bakersfield) and San Gorgonio (near Palm Springs, east of Los Angeles). In 1995, these areas produced 30 percent of the entire world's wind-generated electricity.
Source: http://www.energy.ca.gov/wind/overview.html

22) 21% of the electricity generated in Denmark in 2003 was from wind power.
Source:
http://www.eia.doe.gov/cneaf/solar.renewables/page/non_hydro/nonhydrorenewablespaper_final.pdf#page=4

23) Wind energy provides about .1 % of U.S. energy.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/wind.html

24) Germany has the most installed wind capacity in the world, increasing from 12 gigawatts (GW) in 2002 to more than 14.5 GW in 2003.
Source: http://www.cia.gov/cia/publications/factbook/geos/gm.html#top

25) A typical wind turbine stands as tall as a 20-story building and has three blades that span 200 feet across.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/wind.html

26) The largest wind machines in the world have blades longer than a football field.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/wind.html

27) There are two types of wind turbines; horizontal axis (the more familiar type), and vertical axis (look like eggbeaters). Vertical axis turbines make up just five percent of wind turbines used today.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/wind.html

28) Wind machines convert 30-40% of the wind's kinetic energy into electricity. A coal-fired power plant converts about 30-35% of the chemical energy in coal into useable electricity.
Source: http://www.eia.doe.gov/kids/energyfacts/sources/renewable/wind.html

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