

Other choices some of us make that affect the environment

Environmental impact of bottled water: why drink tap water if your tap water is safe to drink.

- The Container Recycling Institute estimates that supplying Americans with water bottles for one year consumes more than 15 million barrels of oil, which is enough to generate electricity for more than 250,000 homes or fuel 100,000 cars for a year.¹

Environmental impact of eating non-local produce: one sound reason to buy local food.

- The average distance food travels from farm to plate is 1,500 miles.²

Environmental impact of television sets³: why buy a small & energy efficient TV.

- 50-inch plasma High Definition Television sets (HDTV): 679 kWh/year = 0.27 to 0.76 tons CO₂/year emitted.
- 32-inch liquid-crystal display HDTV: 387 kWh/year = 0.15 to 0.43 tons CO₂/year emitted.
- 34-inch older analog TV: 209 kWh/year = 0.08 to 0.23 tons CO₂/year emitted.

¹ *Message in a Bottle: Despite the Hype, Bottled Water is Neither CLEANER nor GREENER Than Tap Water* by Brian C. Howard <http://www.emagazine.com/view/?1125>.

² *Checking the food odometer: comparing food miles for local versus conventional produce sales to Iowa institutions* by Rich Pirog, Leopold Center for Sustainable Agriculture, and Andrew Benjamin, Iowa State University Agricultural and Biological Systems Engineering, July 2003.

³ From: <http://www.csmonitor.com/2005/0616/p13s02-stct.htm> "As TVs grow, so do electric bills;" <http://www.nrdc.org/air/energy/energyeff/tv.pdf> "Televisions: Active Mode Energy Use and Opportunities for Energy Savings;" GreenTech Media Newsletter "How Much Energy Does It Take To Watch TV," 11/11/2007.

Energy use of TVs from study by NRDC, based on 5 hours active more/19 hours on standby (2005). CO₂ Emissions calculated for ND @ 2.24lbs CO₂/kWh; for SD @ 0.80lbs CO₂/kWh

Also available on-line from Prairie Stewardship Network:

- Carbon Dioxide Emissions Worksheet, tailored for North Dakota, Minnesota and South Dakota
- Appliances Sheet: Carbon Dioxide Emissions (lbs) per Month, tailored for North Dakota, South Dakota and Minnesota

In partnership with

The Episcopal Diocese of North Dakota Environmental Stewardship Committee; Presbyterians for Restoring Creation, Northern Plains Presbytery; & Troop 123 (including Eagle Scout Service Projects), sponsored by Faith Lutheran Church, Bismarck.

Prairie Stewardship Network is a 501 (c) (3) organization and is dependent on tax-deductible contributions to support its work on climate stewardship outreach.

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Prairie
Stewardship
Network

*Engaging people and communities
in climate change solutions*

**Concerned
about climate
change?**

**Want to know what you could do to
start making a difference?**

**Do these 5 things that matter first in your home.
Most require minimal effort and cost.**

1. Replace all incandescent light bulbs with compact fluorescent light bulbs = 1/8 to 1/3 ton CO₂ emissions reduction.
2. Line dry clothes during the warmer season (6 months) = 1/4 to 1/2 ton CO₂ emissions reduction.
3. Select air-dry option on dishwasher = 1/8 to 1/3 ton CO₂ emissions reduction.
4. Select Cold/Cold wash on standard washing machine = 1/6 to 1/2 ton CO₂ emissions reduction.
5. Reduce moisture accumulation in always-moist areas and use a dehumidifier that cycles 50% of time (6 months) = 1/3 to almost 1 ton CO₂ emissions reduction.

If you did all 5, you could reduce your yearly household CO₂ emissions from 1 ton (in SD) to 2.8 tons (in ND).

Look inside to see what these practical steps can accomplish to reduce global warming pollution.

North Dakota: Actions Translated
5 effective steps that reduce household CO₂ emissions

South Dakota: Actions Translated
5 effective steps that reduce household CO₂ emissions

1. Replace all 60 watt incandescent with 15 watt compact fluorescent light (CFL) bulbs*, with a maximum of 4 bulbs in use 5 hours a day.					
Light Bulbs	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs) 4 bulbs	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Incandescent	60	150	967.68	725.76	0.363
CFL	15	150	241.92		
2. Line dry clothes 6 months a year instead of using a clothes dryer 12 months a year.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Clothes Dryer 12 months	4600	20	2472.96	1236.48	0.618
Clothes Dryer & Line Dry 6 months each			1236.48		
3. Dishwasher: choose air-dry option instead of heat-dry.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Heat Dry	1200	25	806.4	672	0.336
Air Dry	200	25	134.4		
4. Standard washing machine: choose Cold/Cold wash instead of Warm/Cold.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Warm/Cold		10	1134.24	1037.47	0.518
Cold/Cold		10	96.768		
5. Dehumidifier: for always-moist areas, find ways to reduce moisture accumulation**. A dehumidifier that cycles 50% of time instead of running constantly reduces CO₂ emissions by half. Calculation is for 6 months of use.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Runs Constantly	400	720	3870.72	1935.36	0.967
Cycles 50%	400	360	1935.36		

1. Replace all 60 watt incandescent with 15 watt compact fluorescent light (CFL) bulbs, with a maximum of 4 bulbs in use 5 hours a day.					
Light Bulbs	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs) 4 bulbs	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Incandescent	60	150	345.6	259.2	0.13
CFL	15	150	86.4		
2. Line dry clothes 6 months a year instead of using a clothes dryer 12 months a year.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Clothes Dryer 12 months	4600	20	883.2	441.6	0.221
Clothes Dryer & Line Dry 6 months each			441.6		
3. Dishwasher: choose air-dry option instead of heat-dry.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Heat Dry	1200	25	228	240	0.12
Air Dry	200	25	48		
4. Standard washing machine: choose Cold/Cold wash instead of Warm/Cold.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Warm/Cold		10	405.12	370.56	0.185
Cold/Cold		10	34.56		
5. Dehumidifier: for always-moist areas, find ways to reduce moisture accumulation**. A dehumidifier that cycles 50% of time instead of running constantly reduces CO₂ emissions by half. Calculation is for 6 months of use.					
	Watts	Monthly Usage (hours)	Yearly CO ₂ Emissions (lbs)	Yearly CO ₂ Reductions (lbs)	Yearly CO ₂ Reduction (tons)
Runs Constantly	400	720	1382.4	691.2	0.346
Cycles 50%	400	360	691.2		

*For more information on CFLs, including links to safe disposal, light output equivalency (when replacing incandescent with CFL light bulbs), common questions about sizes and shapes, lighting (warm or cool), use with dimmer, three-way switch, availability of full-spectrum bulbs, and more, visit www.prairiestewardship.org. Go to our "Opportunities" page.

**Go to http://www.ornl.gov/sci/roofs+walls/insulation/ins_18.html for 6 things to consider to help avoid moisture problems in your home.

Background material used in calculations, "Appliances Sheet: Carbon Dioxide Emissions (lbs) per Month," can be found on our website at www.prairiestewardship.org. As noted in that document, wattages and average usage come from Clallam County PUD website and Duke Energy Electrical Appliance Operating Cost List. Average household: 4 members. Please note that wattage for your individual appliances may vary. CO₂ emissions per kilowatt hour are based on Energy Information Administration "Updated State and Regional-level Greenhouse Gas Emission Factors for Electricity" <http://www.eia.doe.gov/oiaf/1605/ee-factors.html> or <http://www.eia.doe.gov/pub/oiaf/1605/cdrom/pdf/e-supdoc.pdf>