

ONE FOR EACH NIGHT

A Hanukkah Study Guide for a Brighter Future



נס גדול היה שם

“How many compact fluorescent light bulbs does it take to change the world?”

And the bow shall be in the cloud; and I will look upon it, that I may remember the everlasting covenant between God and every living creature of all flesh that is upon the earth. (Gen. 9:16)

Welcome!

Hag Sameach and Happy Hanukkah. It is fitting that you have chosen to celebrate the eight nights of Hanukkah by installing a compact fluorescent lightbulb (CFL) each night.

In the Hanukkah story, the small miracle of the oil that burned for eight days stands for the miracle of Judaism surviving from generation to generation. The small “miracle” of a CFL can stand for the greater miracle of changing our use of energy and other resources so that future generations will be able to enjoy the blessings we have.

As you celebrate the new light in your home, talk with your family, congregation, or school about other ways to celebrate caring for creation.

To best enjoy your celebration, use your kit each night as follows:

1. Locate and remove a light bulb (60 watts or 100 watts), not on a dimmable, enclosed, or outdoor fixture.
2. After you have lit Hanukkah candles for the evening, proceed to a comfortable spot near the fixture.
3. Install the new compact fluorescent light bulb.
4. Read aloud the page numbered for this night of Hanukkah. It includes:
 - a light bulb joke,
 - a few paragraphs explaining one of the many good things you are doing by using a CFL, and
 - a closing blessing or prayer.

For more ideas go to our website: www.txipl.org. When you are finished, email us at info@txipl.org and tell us what you've done. We'll add up how many pounds of CO₂ we've kept out of the air by working together.



First Night of Hanukkah

Cleaner Air

How is replacing an old fashioned energy wasting light bulb with a miraculous CFL like making challah?

--It's done with a twist.

Mazel Tov – we all breathe a little easier because of the **8 pounds of nitrogen oxides** and **43 pounds of sulfur dioxide** you've kept out of Texas' air!

Ever wonder what it means when the radio announcer proclaims "today is an Ozone Action Day"? An Ozone Action Day is a smog alert that warns us the air near the ground contains too much ozone for safe breathing.



Power plants that supply electricity for your light bulbs are also responsible for some of the pollutants that contribute to smog and haze producing ozone. Ozone is a confusing gas: the naturally-occurring "ozone layer," 15-30 miles above Earth, shields us from skin-cancer causing solar rays; however, nitrogen oxides (NO_x) from cars and power plants react with natural gases to form ozone "smog" near the ground, where it irritates the lungs, triggers asthma, and damages crops and trees. For ozone, just remember "good up high, bad nearby."

Ozone is an invisible gas, but the haze obscuring the skyline is made of microscopic particles known as particulate matter (PM). PM is formed in the atmosphere from gases such as NO_x and sulfur dioxide (SO₂), which are emitted by power plants and cars. That's why some cities offer free public transportation on days when the ozone is unsafe.

The ozone particles are small enough to penetrate into the lungs and potentially damage the lungs and heart. For this reason, people with asthma and suppressed immunity issues, like the elderly, are advised to stay indoors on high ozone days. The EPA is developing tougher standards on PM because of increased concern about its effect on health. Areas that do not control their ground-level ozone and PM may be in violation of federal standards for both until their emissions are significantly reduced.

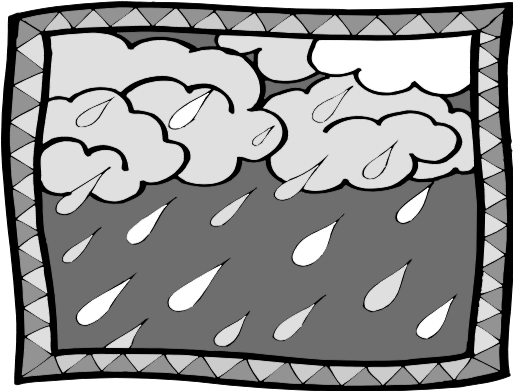
Blessed are You, Spirit of the World, who has given us the gift of life through breath. May we be able to continue to breathe in fresh, clean air, reminding us of humanity's creation.

Second Night of Hanukkah

Cleaner Water

How many people does it take to change a light bulb at a bat mitzvah service?

-- One, the bat mitzvah. She holds the bulb and the universe revolves around her.



Tonight, celebrate protecting the water cycle from **43 pounds** of sulfur dioxide and **8 pounds** of nitrogen oxides.

Power plants produce an alphabet soup of pollutants-- CO₂, NO_x, SO₂, Hg, PM, and more-- when they burn coal and other fuels to generate electricity. Two of these gases-- nitrogen oxide (NO_x) and sulfur dioxide (SO₂)-- react in the atmosphere to form acids, and fall to the ground as "acid rain."

Winds can carry the pollution hundreds of miles, and the effects depend on where the acids eventually deposit. In forests, excessive acid weakens trees by leaching soils of their nutrients and minerals. In cities, acid rain damages statues, buildings, and cars. In lakes and streams, the damage is twofold: acid rain can make waters too acidic for sensitive fish and plants to survive, while excess nitrogen deposits "fertilize" algal blooms that deplete the waters of necessary oxygen.

Blessed are You, Living Waters, who grants rain in its seasons. Help us preserve the lakes, rivers, oceans and all bodies of water, so that all beings can depend on water's sustenance for life.

Third Night of Hanukkah

Stabilized Climate

How many members of our congregation does it take to replace an old light bulb with a CFL?

-- All of them. They spend six months in meetings, focus groups, and online email exchanges discussing it, and when they finally authorize the change, it turns out the administrator installed the CFL months ago.



Envision a world not facing a sudden, human-induced shift in climate. Sense that world becoming a little more possible as you spare the air **3 tons of CO₂** incandescent lighting would otherwise have produced.

One of the biggest threats to the global atmosphere comes from a gas that is both invisible and harmless to breathe, carbon dioxide (CO₂). Whenever fuel, is burned—coal or natural gas to generate electricity, gasoline in your car, the logs in your fireplace-- CO₂ is the main exhaust gas released. It accumulates in the atmosphere for decades, acting as a thickening blanket or “greenhouse gas” to hold in more of the Earth’s warmth.

Global temperatures rose by about a degree last century, and most climate experts believe temperatures will continue to rise as fossil fuel burning injects more greenhouse gases into the atmosphere. Global warming endangers coral reefs, forests, and coastal areas not able to adapt to the increasing temperatures and rising seas.

Each CFL bulb saves enough energy to avert 730 pounds of Earth-warming CO₂ emissions, and 6 pounds of the nitrogen oxides and sulfur oxides that form smog and haze.

Blessed are You, Creator of All Worlds, who with wisdom created our world in a delicate balance. Let us respect how every being and every act connects us as one life.

Fourth Night of Hanukkah

More Peaceful World

How is a CFL like a d'var?

-- It lasts a long time and it should illuminate you.

How many chickens does it take to replace an old lightbulb with a CFL?

-- Two: one to change the bulb, and one to cross the road.



People take up arms for many reasons. The Maccabees fought to protect religious freedom. You have helped to end a less noble reason used by political leaders to justify war, by sparing **two gallons of oil** from being imported.

U.S. oil production peaked in 1970, and the US Geological Survey estimates that 89% of world oil reserves lie elsewhere - 40% in the Middle East, 15% in the former Soviet Union, and 34% in other countries, first among them Mexico and Venezuela with about 4% each. The U.S. now imports 54% of its oil. Guaranteeing access to Kuwaiti oil was given as a reason for the 1991 U.S. war with Iraq.

In a few decades or less, world oil production, too, will have peaked. What will happen when there is no longer enough oil to meet wasteful demands? Will people finally wake up to the need to use energy efficiently? One can hope. Or will there be wars to control the remaining oil?

A side note: Oil accounts for less than one percent of electric power generation in Texas, so the impact of your CFLs on oil is limited. You can probably think of ways to change your transportation habits to reduce the oil you burn. Just keeping tires properly inflated can save dozens of times as much oil as your CFL kit.

By your energy-saving actions, you help lead the way to kicking the oil habit, before it kicks us.

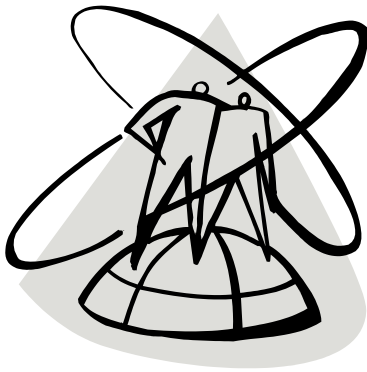
Blessed are You, who spreads the canopy of peace over the four corners of the earth. Guide us in the pursuit of peace and wholeness throughout the world.

Fifth Night of Hanukkah

Safer World

How many Reconstructionist Jews does it take to install a CFL?

-- Four. One to bless the gift the old bulb provided, one to say Shehechyanu, one to change the bulb, and one to bring food.



You have helped ease the nuclear genie back into the bottle, by not buying **658 kWh** of nuclear-generated electricity.

In the 1950's, nuclear electricity was pitched as "Atoms for Peace" and an energy source that eventually would be "too cheap to meter". Today, nuclear still accounts for only 8% of the U.S. energy mix. Largely due to the cost of safeguards, nuclear electricity is more costly than coal, oil, gas, or wind. As for peace, more than one nation has used nuclear electricity to cloak nuclear weapons programs.

Through the Price-Anderson Act, the U.S. government continues to insure utilities against nuclear accident. In 1986, the world witnessed just how serious a nuclear accident could get when a meltdown at Chernobyl in Ukraine severely contaminated an area larger than metro Atlanta, and spread radiation detected as far away as North America.

Nuclear wastes remain deadly for thousands of years. Even if wastes can eventually be stored till they are harmless, transporting wastes from reactors to storage presents a risk.

Today, mounting problems with fossil fuels have prompted talk of a comeback for nuclear energy. But by reducing electricity use, we resist having to choose between bad alternatives.

Blessed are You, Source of Life, who has given us the ability to destroy life and sustain life. Teach us to use our power to support life and growth and to refrain from harm of the earth and other beings.

Sixth Night of Hanukkah

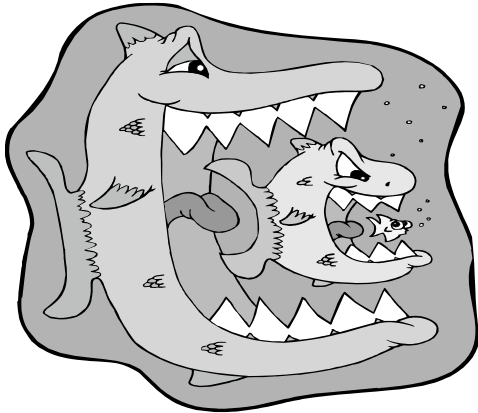
Safe Food Chain

How many Jewish mothers does it take to replace an old bulb with a CFL?

-- Don't trouble yourself, I'll just sit in the dark.

-- Who needs light? You never visit anyway.

-- I should live so long to need a bulb that lasts eight years!



Enjoy a fish dinner or imagine an eagle soaring, and think of the **73 milligrams** of mercury you have prevented from entering the biosphere.

Most of us know mercury as the shiny liquid in old thermometers. But trace amounts of mercury are also contained in coal. Because most power plants burn coal to generate electricity, they represent the largest source of mercury emissions to the atmosphere in the United States.

Mercury deposits from the air onto soils, lakes, and streams, and accumulates in animals along the food chain. That means that as large fish eat smaller fish, which have eaten even smaller creatures and algae, mercury becomes more concentrated. When people and birds eat fish at

the top of this food chain, they consume mercury, which damages the brain and is especially harmful to fetuses and babies. That's why health advisories often warn pregnant women against consuming certain types of fish, and why there is a surprising link between which light bulbs you choose and which fish are safe to eat.

Blessed are You, Nurturing One, who partners with us to bring nourishment to us through food. May we eat our fill and become more sensitive to the balance of all creatures on earth.

Seventh Night of Hanukkah

Bountiful Land

How many Jews does it take to replace an old light bulb with a CFL?
-- 30. One to change the bulb, 29 to kibbitz and share their 30 opinions.



Pause tonight to picture the abundant and complex life in a mountain forest or stream. Visualize a **1.6 square foot** patch of West Virginia forest, undisturbed by coal mining because of the coal you decided not to burn.

In Appalachia, coal miners are losing jobs – not because utilities are burning less coal, but because a smaller workforce can do the work using bigger machines. The larger scale of mining also takes a bigger bite out of the landscape. The most stunning version of this is called mountaintop removal.

In West Virginia, layers of coal often lie not far below the top of flat-topped mountains. With gargantuan earth moving equipment (and cheap diesel fuel!) it is not difficult to remove the “overburden” to get at the coal. But what if the overburden includes the forest home of plants and animals? And where will all that rock go as the landscape is reshaped?

Reclamation laws are sometimes ignored, but even when they are followed, a diverse ecosystem has been replaced by a few grass species, and mountain headwaters lie buried under piles of rock that can release acid downstream. Ironically, some of these windswept sites are being considered as locations for the wind turbines that someday will help make coal obsolete.

Blessed are You, the Ancient One who created the earth in its beauty. Grant us the foresight to respect the land that we have been given by working to conserve its natural beauty.

Eighth Night of Hanukkah

By the Light (of your CFLS)

How many CFLs does it take to change the world?

-- Just one, if you let it illuminate you.



You may imagine that the benefits to the planet would be huge if every home used CFLs as you do. You may also suspect that these benefits are only a fraction of the changes needed to pass along the planet in as good a shape as you received it.

You are right on both counts.

Throughout history, people like the Maccabees have sacrificed so their children might have a better life. In recent decades we have strayed from this path. Why do we go on burning up assets that belong to the future for the sake of a moment's convenience?

- We don't believe our habits are causing a problem. We assume that the planet is a boundless source of nourishment and sink for waste.
- We believe the alternatives require too much sacrifice. We ignore technologies like CFLs. We assume that a less car-oriented lifestyle would inconvenience us rather than improving the quality of life.
- We don't think individuals can make a difference. We wait for leaders to make the first move.

The real goal of this kit has been to challenge these assumptions and to find ways we can help repair and heal the Creation. We hope you will want to learn more and to do more, individually, in your families, in your schools, and in your congregations.

More Resources

For further reading you might try:

Natural Capitalism by Hawken, Lovins, and Lovins

Cradle to Cradle by McDonough and Braungart

The Natural Step Story by Karl-Henrik Robert

and on a more philosophical note:

The Spell of the Sensuous by David Abram

You will also find resources at the Texas Interfaith Power and Light website: www.txipl.org.

Acknowledgements

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