

# JEWISH PERSPECTIVES TOWARD A WISER AND MORE ETHICAL USE OF ENERGY

■ **RABBI YONATAN NERIL**

*Israeli Orthodox Jewish rabbi*  
and

■ **DANIEL WEBER, PH.D.**

*American Orthodox Jewish scientist*





**RABBI YONATAN NERIL** founded and directs the The Interfaith Center for Sustainable Development. A native of California, Yonatan completed an M.A. and B.A. from Stanford University with a focus on global environmental issues, and received rabbinical ordination in Israel. He has spoken internationally on religion and the environment, and organized three interfaith environmental conferences in Jerusalem in which religious leaders of several faiths spoke.



**DR. DANIEL WEBER** is a Senior Scientist at the University of Wisconsin-Milwaukee School of Freshwater Sciences. Using fish as a model of human environmental health, Dr. Weber studies long-term and intergenerational behavioral effects of early life exposures to a range of toxic chemicals such as lead, mercury and BPA. Community outreach has been an important aspect of Dr. Weber's professional career and has included interactions with public health professionals, schools and inner city neighborhoods. Using this experience, Dr. Weber is a GreenFaith Fellow, the Chair of the Canfei Nesharim Science and Technology Advisory Board, and a Board member of Wisconsin Interfaith Power & Light.

**M**ore than at any moment in history, we face a religious and ethical challenge today in how we use energy. While the use of fossil fuels like coal, oil and gas and of nuclear power have greatly increased material standards of living for billions of people, they also have driven significant environmental impacts, including global climate change, the BP oil spill, and Japan's Fukushima nuclear crisis. People around the world, especially in poorer countries, are suffering the effects of climate change. Among Jews, thousands had their homes flooded in recent years, from Hurricanes Irene and Sandy (2011 and 2013) in New York and New Jersey, to Hurricane Matthew in Florida and the Carolinas (2016), to the flooding in Houston (2015 and 2016). In Israel, extreme heat waves and snowstorms have devastated agriculture.<sup>1</sup>

A typical American household consumes over 12,000 kilowatt-hours of electricity per year. Each kilowatt-hour of electricity from a coal-fired power plant releases over two pounds (nearly 1 kilogram) of carbon dioxide (CO<sub>2</sub>).<sup>2</sup> Per capita energy consumption in Israel, while below that of the US, is on the rise.

A consensus of international scientists—i.e. the mainstream in science—state that human-caused global climate change is likely to bring on more severe heat waves, storms, floods, and droughts, with major impacts on human societies.<sup>3</sup> A major study “directly links rising greenhouse-gas levels with the growing intensity of rain and snow in the Northern Hemisphere,” adversely impacting hundreds of millions of people.<sup>4</sup> Leading climatologists stated “with a high degree of confidence” that the extreme heat waves like those in recent years in multiple countries “were a consequence of global

1 Green, MS et al. Climate change and health in Israel: adaptation policies for extreme weather events. *Isr J Health Policy Res.* 2: 23- , 2013. <http://www.ijhpr.org/content/2/1/23>.

2 <http://www.worldwatch.org/pubs/goodstuff/lighting/>

3 See the Assessment of the Intergovernmental Panel on Climate Change (IPCC), online at [www.ipcc.ch](http://www.ipcc.ch) The data is detailed in the Synthesis Report from a gathering of 2,500 scientists and based on their research. For additional information refer to the US Climate Change Science Program Report *Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems* See also the statement of Canfei Nesharim's science and technology advisory board, online at <http://canfeinesharim.org/learning/environmental.php?page=22256>

4 “Human contribution to more-intense precipitation extremes,” Min, S.-K. et al. *Nature* 470, 378-381 (2011). As reported in “Increased Flood Risk Linked to Global Warming, by Quirin Schiermeier, *Nature News*, 2.16.11, online at <http://www.nature.com/news/2011/110216/full/470316a.html#B1>

warming.”<sup>5</sup> In Hurricane Sandy of 2012, a number of scientists partially attribute to climate change the strength of the storm surge that caused widespread destruction in New Jersey and New York.<sup>6</sup> 2015 was the hottest year on record, by the widest margin on record.<sup>7</sup>

The most recent report from the Intergovernmental Panel on Climate Change (IPCC) noted that in recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. In many regions, changing precipitation or melting snow and ice are altering hydrological systems, affecting water resources in terms of quantity and quality. Many terrestrial, freshwater, and marine species have shifted their geographic ranges, seasonal activities, migration patterns, abundances, and species interactions in response to ongoing climate change. Based on many studies covering a wide range of regions and crops, negative impacts of climate change on crop yields have been more common than positive impacts.<sup>8</sup>

What can we learn from a Jewish tradition that developed from an agrarian society that was intimately attuned to nature about how to use energy responsibly?<sup>9</sup>

## Use Energy Wisely

Energy sustainability and the wise use of resources are important issues in the Jewish community.<sup>10</sup> Jewish tradition teaches us that wasting energy

---

5 See also “Perceptions of Climate Change,” James Hansen et. al, *Proceedings of the National Academy of Sciences*, <http://www.pnas.org/content/109/37/E2415.full.pdf+html>

6 “Hurricane Sandy Underscores Climate Change Threat to Coasts,” Union for Concerned Scientists, 10.30.2012 Online at [http://www.ucsusa.org/news/press\\_release/hurricane-sandy-climate-change-coasts-0345.html](http://www.ucsusa.org/news/press_release/hurricane-sandy-climate-change-coasts-0345.html)

7 United States National Oceanic and Atmospheric Administration, Global Summary Information, December 2015, <http://www.ncdc.noaa.gov/sotc/summary-info/global/201512>

8 IPCC. Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. 2014.

9 Prior to the industrial revolution, the most important sources of energy for human uses were animals, people, wood, wind, and water. This changed with the invention of the steam turbine, internal combustion engine, and jet engine.

10 Weber, D. Saving the Planet: Perspectives from the Orthodox Jewish Community. Report for Canfei Nesharim and GreenFaith. 2016.

is a violation of Bal Tashchit, the prohibition not to waste excessively.<sup>11</sup> For example, the Talmudic Sage Mar Zutra stated, “One who covers an oil lamp [causing the flame to burn inefficiently] or uncovers a kerosene lamp [allowing the fuel to evaporate faster] violates the prohibition of Bal Tashchit.”<sup>12</sup>

More than at any moment in history, we face a religious and ethical challenge today in how we use energy.

Given the economic and moral common sense of energy efficiency, it is disappointing to note the massive levels of energy wastage. For example, according to the Energy Analysis Department of the Lawrence Berkeley National Laboratory, “A surprisingly large number of electrical products—TVs to microwave ovens to air conditioners—cannot be switched off completely without being unplugged. These products draw power 24 hours a day, often without the knowledge of the consumer. A typical American home has forty products constantly drawing power. Together these amount to almost 10% of residential electricity use.”<sup>13</sup> And how many of us use more lights in the house than are actually required? To this, the Ben Ish Chai (Rabbi Yosef Chaim ben Eliyahu), a major halakhic authority of 19<sup>th</sup> century Iraq, addressed a related case in which a person lit two wicks in oil for use at night. The person left both wicks lit throughout the night in the event they woke up in the middle of the night and needed to see. In order to prevent waste, the Ben Ish Chai instructed the person to extinguish one wick before going to bed, since were they to get up they would only need the minimal light of one wick and keeping the second wick lit would be a

---

11 For more on this topic, see the Jewcology resources on Bal Tashchit, available at [www.jewcology.com](http://www.jewcology.com)

12 Babylonian Talmud, Tractate Shabbat 67b. Translation by Dr. Akiva Wolff based on commentary of Rashi. Rabbi Moshe Yitzhak Forehand, in *Bircat Hashem* p. 144, comments on the statement of Mar Zutra that the person’s action is considered ‘in a destructive manner’ since a person does not use the portion of oil that is lit in order for it to burn faster.

13 Online at <http://standby.lbl.gov/>

transgression of Bal Tashchit, the prohibition not to destroy or waste.<sup>14</sup> This halakhic responsa shows a high degree of concern for wasting energy and the unnecessary use of oil, where no benefit is derived from the additional use of energy.

If the Ben Ish Chai was concerned about the unnecessary use of one wick in an oil lamp, how much the more so should we be concerned about dozens of appliances that quietly, constantly use energy without benefiting the user? And the inefficiencies of so many appliances and heating systems?

Similarly, the Ben Ish Chai discusses a case in which a person puts a large amount of oil before Shabbat in a lamp in their home so it will remain lit for all of Shabbat. He rejects this practice as a waste of oil and a transgression of Bal Tashchit, since the light from this lamp will not be of benefit to a person during the day in their sun-lit home. In our time, this responsa may be relevant concerning leaving lights, heaters, air conditioners, or other appliances running for all of Shabbat or during the week when a person will not derive benefit from them. To address this issue, many observant Jews use timers on their lights and appliances to reduce wasteful use of energy on Shabbat and holidays.

## For Our Health

Modern energy use causes pervasive air pollution from many sources, including motor vehicles, industrial factories, and power plants in most of the major cities in the world. We now know that when air pollution declines, there is a proportional drop in death rates.<sup>15, 16</sup> The World Health Organization reported that seven million premature deaths annually are caused by air pollution.<sup>17</sup> A joint Israeli-US study found that more people die in Israel from air pollution than from traffic accidents, and more than from terrorist attacks.<sup>18</sup> Imagine if we, as a species were to respond to fossil fuel-induced

14 Torah Lishma, section 76.

15 "Cleaner Air Brings Drop in Death Rate," Nicholas Bakalar, *The New York Times*, 3-21-06, based on a study published in *The American Journal of Respiratory and Critical Care Medicine*, 3-15-06.

16 <http://www.who.int/mediacentre/factsheets/fs313/en/> Fact Sheet #313, August 2008.

17 "7 million premature deaths annually linked to air pollution," 3.25.16, WHO News Release, <http://www.who.int/mediacentre/news/releases/2014/air-pollution/en/>

18 The two-and-a-half-year study was conducted in 2003 by a team from Israel's Ministry of Environment, the Israeli Union for Environmental Defense, and the US Environmental Pro-

mortalities with the same level of concern as we devote to our political enemies. Furthermore, cities tend to be hotter than the surrounding rural areas, which is called the urban heat island effect. As cities get hotter, climate change-induced heat-stress will fall disproportionately on the young, elderly and poor.<sup>19</sup>

Climate change is already having significant impacts on transport pathways and cycling of toxic chemicals such as mercury.<sup>20</sup> Not only does the cycling of mercury change due to increased temperatures but so does uptake and metabolism of mercury compounds in fish<sup>21</sup> and possibly among human populations such as Native Americans and Pacific Islanders that depend upon fish which often are contaminated with mercury. This is, perhaps, one of the most devastating cases of environmental injustice because the effects of toxic chemicals can extend to succeeding generations. Are we accelerating the poisoning of our children and grandchildren by our wasteful and unsustainable use of energy resources?

## Are we accelerating the poisoning of our children and grandchildren by our wasteful and unsustainable use of energy resources?

Jewish tradition recognizes the importance of protecting our health from the impacts of air pollution. Rabbi Ezra Batzri, former head of the Sephardi Rabbinical Court in Jerusalem, writes that causing harmful forms of

---

tection Agency. A summary of the study is available at <http://www.adamteva.org.il/?Category-ID=424&ArticleID=391&SearchParam=air+pollution> A related study, "Assessing the spatial and temporal variability of fine particulate matter components in Israeli, Jordanian, and Palestinian cities," *Atmospheric Environment* 44 (2010) notes how urban air pollution is a significant contributor to the disease burden in the Middle East. Online at [http://cfpub.epa.gov/ncer\\_abstracts/index.cfm/fuseaction/display/pubfulltext/publication\\_id/53977](http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display/pubfulltext/publication_id/53977)

19 Patz, JA et al. Impact of regional climate change on human health. *Nature* 438, 310-317, 2005.

20 Stern, GA et al. How does climate change influence arctic mercury? *Science of the Total Environment*. 414:22-42, 2012.

21 Maulvault, AL et al. Bioaccumulation and elimination of mercury in juvenile seabass (*Dicentrarchus labrax*) in a warmer environment. *Environmental Research* 149:77-85, 2016.

pollution to others is “not to be considered as inconsequential. [Rather] they are matters of Jewish law that stand up at the heights of the world.” He notes therefore that a character trait of a righteous person (Midat Hasidut) is being careful about not damaging others even indirectly.<sup>22</sup>

If Rabbi Batzri teaches that the righteous person takes care not to damage others even indirectly, how much the more so should we act to prevent fossil-fuel induced mortalities and sickness from motor vehicles, industrial factories, and power plants, and choose sustainable energy?

### Keeping Cities’ Air Clear

The Talmud discusses how large ovens were not allowed in Jerusalem, lest the smoke from the ovens blacken the walls of the Holy City and make it less beautiful.<sup>23</sup> Furthermore, the Mishnah prohibited using olive wood, grapevines and fruit-bearing fig trees and date palms for burning in the Temple in Jerusalem, which according to some rabbinic views was because they produced excessive smoke.<sup>24</sup> Jerusalem had the highest level of sanctity of all cities in the Land of Israel, and which required that its air quality be preserved.

A thick layer of smog often hangs over the coastal plain of Israel from Ashkelon to Tel Aviv to Netanya. With many of the Jewish holidays proscribing driving on specific holidays, it is amazing to see a 70-90% drop in air pollution on those days in specific municipalities.<sup>25</sup> The Israel Ministry of Environmental Protection has developed a strategy to combat climate change that includes energy efficiencies, green technologies and infrastructure, and a greenhouse gas registry.<sup>26</sup>

---

22 Sefer Dinei Mamonot, 2nd chapter on damages, page 376, note 9, and elsewhere.

23 Babylonian Talmud, Tractate Bava Kama 82b, and commentary of Rashi there. Maimonides codifies this in *Mishna Torah*, Hilchot Beit Habechira, 7:14.

24 Mishna Tamid 29a and Talmud p. 29b. Based on the statement of Rav Papa in the Talmud, this is the explanation of Rabeinu Gershom, Mefarsh, and one view cited by the Rosh.

25 As one example of this phenomenon see Udasin, S., Israelis enjoy dramatic increase in air quality over Yom Kippur, The Jerusalem Post, <http://www.jpost.com/Business-and-Innovation/Environment/Israelis-enjoy-increase-in-air-quality-over-Yom-Kippur-417916>.

26 State of Israel Ministry of Environmental Protection. *Climate Change Policy in Israel*, November 2011.

While the rabbinic laws to preserve the air quality of Jerusalem and Israel’s cities are for the most part not in force today, we would be wise to consider their wisdom for our current situation in order to develop a newer, healthier vision for cities throughout the world.

If the Mishnah prohibits activities producing excessive smoke for the sake of the beauty and air quality of Jerusalem, should we not put into action all the strategies for energy efficiency, green technology, and greenhouse gas reduction that the Israel Ministry recommends, in ways suited to our own communities?

### Shabbat, Fire, and Energy

When we speak about human energy use today, we are primarily speaking about our use of fire. Fire is the paradigmatic technology, which human beings use to master the world. Fire enabled metallurgy, the shaping of mineral ores into tools, which over human history have become more and more advanced. Today we have machines which rely on fire: internal combustion engines in our cars, power plants that produce electricity, and lights and appliances in our homes and offices that run on electricity. The tremendous wealth of modern society stems from the use of industrial technology powered by fossil fuels ignited to kindle fire.

Rabeinu Bachya (Spain, 1255-1340) teaches that “Fire, i.e. light, was the first of the activities God engaged in when creating the universe.”<sup>27</sup> He also notes that “Making fire is an appropriate example of basic human activity seeing that most of the principal activities we are engaged in cannot be performed satisfactorily if one were not able or allowed to make fire.” For six days of the week we are supposed to properly use fire, which represents human mastery over the world.

In contrast to this utilitarian relationship with Earth’s resources, the Torah teaches, “You shall not kindle fire in any of your dwelling places on the Sabbath day.”<sup>28</sup> On Shabbat, we are instructed to refrain from using fire,

---

27 Commentary to Exodus 35:2, citing Genesis 1:2, in *Torah Commentary by Rabbi Bachya ben Asher*, translated and annotated by Eliyahu Munk, Lamda Publishers, Brooklyn, NY, 2003

28 Exodus 35:2, Judaica Press translation.

demonstrating that true mastery belongs to G-d alone. As Rabbi Sampson Raphael Hirsch teaches, "...the ability to produce fire artificially is just that which first gave Man his true mastery over the materials of the world. Only by means of fire can he create his tools."<sup>29</sup> Rabbi Hirsch explains, "On Sabbath the cessation of work is the belief and acknowledgment that the ability to 'master matter,' the creative productive power that Man has, is lent to him by God, and is only to be used in His service."<sup>30</sup>

Jews mark the entrance and exit of Sabbath by lighting candles, and on the seventh day itself rest from using fire. Shabbat is the prime vehicle through which a Jew can learn balance in using fire, and by extension, energy and technology. According to traditional Shabbat observance, there is rest from cars and computers, tablets and cell phones, recorded music, trains, and alarms.<sup>31</sup> Shabbat, therefore, is the paradigm of how society can make choices and develop sound policies to reduce the amount of energy we need and also help us put ourselves in correct relationship with our use of energy.<sup>32</sup>

## Toward Sustainable Energy Use

One way we can reduce the impacts of our use of fire is to use more renewable energy. In 1981, the Lubavitcher Rebbe made a call to significantly increase the use of solar energy in the United States. He said, "Very soon, the entire country should switch, first of all, to energy that can be generated from the sun's rays in the [US] south, which should be supplied to the entire country."<sup>33</sup> His call to use renewable energy is relevant today more than

---

29 Commentary to Exodus 35:3

30 Commentary to Exodus 35:3

31 The halakhic permissibility of using electricity on Shabbat is based on pikuach nefesh [saving a human life]: since we need electricity for emergency and security services, we can use it generally for other needs in a passive sense. For a 250-page exploration of Jewish law in relation to electrical appliances, including refrigerators, alarm systems, dishwashers, and elevators, see *Shabbat and Electricity*, by Rabbi L.Y. Halperin, compiled by Rabbi Dovid Oratz, Institute for Science and Halacha: Jerusalem, 1993.

32 For more on this theme, see the Jewcology.org article on Shabbat, by Yonatan Neril.

33 As quoted in *Mind over matter: the Lubavitcher Rebbe on science, technology and medicine*, by Rabbi Menahem Mendel Schneerson, original Hebrew edition compiled by Joseph Ginsburg and Herman Branover; edited and translated into English by Arnie Gotfryd. Jerusalem: Shamir, 2003. p. 257. The talk, given in Yiddish and with English subtitles, is available online at [www.chabad.org](http://www.chabad.org)

ever. Solar energy utilizes fire in a different way, by making use of the tremendous energy reaching the earth from the fire that is the sun. For example, solar water heaters harness the sun's rays to heat water and thus reduce electricity demand from fossil fuel sources. The Good Energy Initiative works to provide financial incentives to poorer families in Israel to use solar water heaters instead of conventional heaters that rely on burning fossil fuels.<sup>34</sup> Recent environmental campaigns have adopted the call for society to shift to using 100% renewable energy. We find the spirit behind this call to be consistent with Jewish teaching.

**Shabbat, therefore, is the paradigm of how society can make choices and develop sound policies to reduce our energy use and put ourselves in correct relationship with our use of energy.**

Judaism is a communal religion with interconnected circles of responsibility: individual, family, synagogue/school and larger community. An individual might say to him or herself: 'But I am just one person—my consumption has a negligible effect on the global climate. There are 6.9 billion people in the world<sup>35</sup> and 10.5 million people in Israel—my using energy wisely won't make a difference!' This way of thinking goes against the advice of the Sages, who said that not only does a person need to act as if the entire world was created for them<sup>36</sup> but saving even one life is equivalent to saving a world.<sup>37</sup> We cannot know the effect of our actions in advance but we can participate in moral imperatives involving sustainable behaviors and be a model for others.

An individual can make a difference by using less energy, i.e., by driving

---

34 For more on this project see <http://www.goodenergy.org.il/language/en-US/En/Projects/Project-Portfolio/Kol-Dudi-Solar-water-heaters.aspx>

35 According to United Nations statistics, 2011.

36 Mishna Sanhedrin 4:5: "...each and every one is obliged to say, 'For my sake the world was created'.

37 Mishnah Sanhedrin 4:5; Yerushalmi Talmud 4:9, Babylonian Talmud Sanhedrin 37a.

less, eating less meat or globalized food, or taking fewer plane trips. It is in this realm of personal consumption that Jewish thought may best inform our energy and climate challenges today and empower us to change. Bal Tashchit of energy, protecting the health of our neighbors, maintaining the air quality of cities, and not making fire on Sabbath all have in common the restraint of individuals to achieve a higher purpose. These teachings instruct us about prudent, conscious, and elevated use of energy. Energy is a precious resource that must be used wisely. If not, its misuse has serious consequences for people and the planet.

Recent environmental campaigns have adopted the call for society to shift to using 100% renewable energy. We find the spirit behind this call to be consistent with Jewish teaching

### Where Do We Go from Here?

The Jewish community is diverse both religiously and politically. As a result, it is not possible to state categorically what specific policies it would, as a community, support. However, there are two paths of ethical energy use that we can collectively embrace. The first is a series of steps that can fit into people's busy lives. Busy-ness is a problem for many of us experience, and can be a significant barrier to sustainable behavior.<sup>38</sup> Each of the following action steps, when multiplied over an entire community, can have significant impacts on mitigating climate change.

- **Compost.** The production of methane gas, a major greenhouse gas, from food waste is a significant factor.<sup>39</sup> Increasing opportunities to compost food waste is an easy-to-do project for many families.
- **Solar Energy.** There is an increasing array of programs available that create financial incentives to install solar panels on congregational buildings. With high interest in the Jewish community and with the availability of public and private sector incentives to reduce barriers to sustainable behavior for many in the Jewish community, it is reasonable to set as a goal the transition to 100% renewable energy by the Jewish community in all their congregational buildings.
- **Jewish Environmental Education.** Increasing teaching on how Jewish values guide sustainable behavior will further ethical energy choices.
- **Advocacy:** Individuals and synagogues should call on governments to end fossil fuel subsidies—particularly those subsidies that support continued exploration for new sources of fossil fuels. We should also urge governments to increase their ambitions beyond their commitments in the Paris Agreement, and doing so in 2018—the next time negotiators will have the opportunity to formalize such increased commitments. Finally, we can advocate for putting a price on carbon. This would involve a government promoting the private sector becoming more sensitive to the effects of fossil fuel pollution.<sup>40</sup>
- **Support programs such as the Green Climate Fund,** to which the United States is a significant contributor, do match well with an interest in using the private sector to advance environmental sustainability,<sup>41</sup> particularly in countries with few resources to create a green infrastructure, and a sense of moral responsibility to assist those in need.

---

38 Weber, D. op. cit.

---

39 Adhikari, BK. Predicted growth of world urban food waste and methane production. *Waste Manag Res* 24:421-433, 2006.

40 Weber, D. op. cit.

41 Weber, D. op. cit.

- **Investment:** We can invest a percentage of our personal and communal assets into projects that can end energy poverty in poor countries with clean energy by 2030, consistent with the UN’s Sustainable Development Goal #7. We should also scale up investments in renewable energy.<sup>42</sup>

Rabbi Hillel once said: “If I am not for myself, who will be for me? But if I am only for myself, who am I? If not now, when?”<sup>43</sup> If we do not change how we use energy now—when so much is at stake for ourselves and the next generation, then when will we do so? There is no time to waste. We must act not only for ourselves, our immediate community, but also for all humanity and species alive today and in the future. This is the religious and ethical imperative of our time.

*A portion of this material was produced as part of the Jewcology project. Jewcology.org is a web portal for the global Jewish environmental community.*

---

<sup>42</sup> The International Renewable Energy Agency suggested this as key to effective action against climate change. See IRENA. *REthinking Energy: Renewable Energy and Climate Change*. 2015.

<sup>43</sup> Pirke Avot 1:14.



**GREENFAITH.ORG | INTERFAITHSTATEMENT2016.ORG**  
**HTTP://WWW.GREENFAITH.ORG/PROGRAMS/GREENFAITH-DAY**  
**#FAITHS4CLIMATEACTION**