**Our first argument is Environment**

**Renewables are on the rise, offering a sustainable future**

#### **The World Resources Institute confirms just over a month ago:**

#### Lori Bird, 02/21/2025, US Clean Power Development Sees Record Progress, As Well As Stronger Headwinds, World Resources Institute, <https://www.wri.org/insights/clean-energy-progress-united-states#:~:text=Adding%20it%20up:%20Is%20the,in%202024%2C%20growth%20has%20slowed> //Bruce

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#### Solar deployment and electric vehicle (EV) sales broke records in 2023 and 2024. Renewables now dominate new power generation capacity, while new domestic clean energy manufacturing facilities are popping up around the nation. Following the record-breaking outcomes of 2023, 2024 was another impressive year for clean energy deployment in the United States. These upward trends signal that clean electricity sources are an increasingly vital part of the U.S. economy and power system, with renewable sources and battery storage making up the vast majority of new additions to the grid. Solar surpassed 2023’s record installations in 2024, adding an estimated 39.6 gigawatts (GW) of capacity, compared to 27.4GW in 2023. Installed solar capacity in the U.S. now totals about 220 GW, enough to provide over 7% of the nation’s electricity. This continues a decade-long trend of rapid growth in solar power. Battery storage nearly doubled in 2024, with total installed capacity reaching almost 29 GW — and projected to grow another 47% in 2025. This growth in capacity will help support the grid when variable renewable energy technologies, such as solar and wind, are unavailable, making the U.S. power system more stable and secure.Taken all together, **renewables vastly outpaced other generation sources and collectively accounted for around 90% of the United States’ new installed capacity in 2024**. With the new projects online, renewables (including wind, solar, geothermal and hydropower) and battery storage now make up 30% of the country’s large-scale power generating capacity. In 2024, all carbon free electricity sources, including nuclear, supplied nearly 44% of electricity, while renewables, including small-scale solar, supplied nearly 25%.

**This is really important, as renewables are key to stopping climate change**

**According to the United Nations in 2022**  United Nations. “Renewable Energy – Powering a Safer Future.” United Nations, United Nations, 2022, www.un.org/en/climatechange/raising-ambition/renewable-energy.

**Renewable energy actually is the cheapest power option in most parts of the world today.** Prices for renewable energy technologies are dropping rapidly. The cost of electricity from solar power fell by 85 percent between 2010 and 2020. Costs of onshore and offshore wind energy fell by 56 percent and 48 percent respectively. Falling prices make **renewable energy** more attractive all around – including to low- and middle-income countries, where most of the additional demand for new electricity will come from. With falling costs, there is a real opportunity for much of the new power supply over the coming years to be provided by low-carbon sources.

Cheap electricity from renewable sources could provide 65 percent of the world’s total electricity supply by 2030. It **could decarbonize 90 percent of the power sector by** 2050, **massively cutting carbon emissions and helping to mitigate climate change.**

**Problematically, affirming causes a reversal, as nuclear creates a financial tradeoff with renewables**

**In fact, the INN wrote just last month that** [Innovation News Network, 2-20-2025, “The economic impacts of investing in nuclear energy infrastructure”, Innovation News Network, https://www.innovationnewsnetwork.com/the-economic-impacts-of-investing-in-nuclear-energy-infrastructure/54647/#:~:text=Taking%20investment%20away%20from%20renewables&text=Any%20investment%20in%20reactor%20infrastructure,time%20to%20fight%20climate%20change DOA 3/23/25]

**The operational and capital cost of nuclear energy is** additionally **worrisome** when considered in light of the overall low-carbon electrical market. **Any investment** in reactor infrastructure **is a decision not to invest in alternatives like renewables. Lower relative funding for such competitors may heighten concerns as the world runs out of time to fight climate change**.

**This only pushes us further from solving climate change, as nuclear energy is horrible for the environment**

**According to Joshua Weber of DW in 2021** [Joshua Weber (editor and head of DW Fact-checking), 11-29-2021, “Fact check: Is nuclear energy good for the climate?”, Deustche Welle, DOA 3/23/25]

Is nuclear power a zero-emissions energy source? No. **Nuclear energy is** also **responsible for greenhouse gas emissions**. In fact, no energy source is completely free of emissions, but more on that later. When it comes to nuclear, **uranium extraction, transport and** **processing produces emissions. The long and complex construction process of nuclear power plants also releases CO2,** as does the demolition of decommissioned sites. And, last but not least, **nuclear waste also has to be transported and stored under strict conditions** — here, too, emissions must be taken into account. And yet, interest groups claim nuclear energy is emission-free. Among them is Austrian consulting firm ENCO. In late 2020, it released a study prepared for the Dutch Ministry of Economic Affairs and Climate Policy that looked favorably at the possible future role of nuclear in the Netherlands. "The main factors for its choice were reliability and security of supply, with no CO2 emission," it read. ENCO was founded by experts from the International Atomic Energy Agency, and it regularly works with stakeholders in the nuclear sector, so it's not entirely free of vested interests. At COP26, environmental initiative Scientists for Future (S4F) presented a paper on nuclear energy and the climate. The group came to a very different conclusion. "Taking into account the current overall energy system, nuclear energy is by no means CO2 neutral," they said. Ben Wealer of the Technical University of Berlin, one of the report's authors, told DW that proponents of nuclear energy "fail to take into account many factors," including those sources of emissions outlined above. All the studies reviewed by DW said the same thing: Nuclear power is not emissions-free. How much CO2 does nuclear power produce? Results vary significantly, depending on whether we only consider the process of electricity generation, or take into account the entire life cycle of a nuclear power plant. A report released in 2014 by the UN's Intergovernmental Panel on Climate Change (IPCC), for example, estimated a range of 3.7 to 110 grams of CO2 equivalent per kilowatt-hour (kWh). It's long been assumed that nuclear plants generate an average of 66 grams of CO2/kWh — though Wealer believes the actual figure is much higher. New power plants, for example, generate more CO2 during construction than those built in previous decades, due to stricter safety regulations. Studies that include the entire life cycle of nuclear power plants, from uranium extraction to nuclear waste storage, are rare, with some researchers pointing out that data is still lacking. In one life cycle study, the Netherlands-based World Information Service on Energy (WISE) calculated that **nuclear plants produce 117 grams of CO2 emissions per kilowatt-hour**. It should be noted, however, that WISE is an anti-nuclear group, so is not entirely unbiased. Emissions Balance Energy Sources 2020 However, other studies have come up with similar results when considering entire life cycles. Mark Z. Jacobson, director of the Atmosphere / Energy Program at California's Stanford University, calculated a climate cost of 68 to 180 grams of CO2/kWh, depending on the electricity mix used in uranium production and other variables. How climate-friendly is nuclear compared to other energies? If the entire life cycle of a nuclear plant is included in the calculation, nuclear energy certainly comes out ahead of fossil fuels like coal or natural gas. But the picture is drastically different when compared with renewable energy. According to new but still unpublished data from the state-run German Environment Agency (UBA) as well as the WISE figures, **nuclear power releases 3.5 times more CO2** per kilowatt-hour **than** photovoltaic **solar** panel systems. **Compared with** onshore **wind** power, **that figure jumps to 13 times more CO2.** When **up against** electricity from **hydropower** installations**, nuclear generates 29 times more carbon.** Could we rely on nuclear energy to help stop global warming? Around the world, nuclear energy representatives, as well as some politicians, have called for the expansion of atomic power. In Germany, for example, the right-wing populist AfD party has backed nuclear power plants, calling them "modern and clean." The AfD has called for a return to the energy source, which Germany has pledged to phase out completely by the end of 2022. Other countries have also supported plans to build new nuclear plants, arguing that the energy sector will be even more damaging for the climate without it. But Wealer from Berlin's Technical University, along with numerous other energy experts, sees takes a different view. Watch video03:06 Germany's nuclear phaseout is almost done "The contribution of nuclear energy is viewed too optimistically," he said. "In reality, [power plant] construction times are too long and the costs too high to have a noticeable effect on climate change. It takes too long for nuclear energy to become available." Mycle Schneider, author of the World Nuclear Industry Status Report, agrees. "Nuclear power plants are about four times as expensive as wind or solar, and take five times as long to build," he said. "When you factor it all in, you're looking at 15-to-20 years of lead time for a new nuclear plant." He pointed out that the world needed to get greenhouse gases under control within a decade. "And **in the next 10 years, nuclear power won't be able to make a significant contribution**," added Schneider. "Nuclear power is not being considered at the current time as one of the key global solutions to climate change," said Antony Froggatt, deputy director of the environment and society program at the international affairs think tank Chatham House in London. He said a combination of excessive costs, environmental consequences and lack of public support were all arguments against nuclear power.

**Overall, affirming takes away our ability to respond quickly to climate change, as nuclear energy will never be fast enough to solve for warming**

**Jacobson ‘21** Mark Z. Jacobson, Professor of Civil and Environmental Engineering & Director, Atmosphere/Energy Program, Stanford University, “The 7 reasons why nuclear energy is not the answer to solve climate change,” April 26, 2021, <https://eu.boell.org/en/2021/04/26/7-reasons-why-nuclear-energy-not-answer-solve-climate-change> //SBB

There is a small group of scientists that have proposed replacing 100% of the world’s fossil fuel power plants with nuclear reactors as a way to solve climate change. Many others propose nuclear grow to satisfy up to 20 percent of all our energy (not just electricity) needs. They advocate that nuclear is a “clean” carbon-free source of power, but they don’t look at the human impacts of these scenarios. Let’s do the math... **One nuclear power plant takes on average** about **14-1/2 years to build**, from the planning phase all the way to operation. According to the World Health Organization, about 7.1 million people die from air pollution each year, with more than 90% of these deaths from energy-related combustion. So **switching** out our energy system **to nuclear would result in** about **93 million people dying, as we wait for** all the **new** nuclear **plants to be built** in the all-nuclear scenario. Utility-scale wind and solar farms, on the other hand, take on average only 2 to 5 years, from the planning phase to operation. Rooftop solar PV projects are down to only a 6-month timeline. So transitioning to 100% renewables as soon as possible would result in tens of millions fewer deaths. This illustrates a major problem with nuclear power and why renewable energy -- in particular Wind, Water, and Solar (WWS)-- avoids this problem. Nuclear, though, doesn’t just have one problem. It has seven. Here are the seven major problems with nuclear energy 1. Long Time Lag Between Planning and Operation

**Our Second Argument is about Health**

**Nuclear waste is catastrophic for human health in two ways. The first is waste, as the United States lacks a disposal mechanism for nuclear waste**

**Nicole Feldman of Stanford explains in 2018 that**Nicole Feldman 2018, 7/3/2018, "The steep costs of nuclear waste in the U.S.", Stanford Doerr School of Sustainability, https://sustainability.stanford.edu/news/steep-costs-nuclear-waste-us /HS

**Nuclear waste is accumulating** at sites **across the** country. Nuclear security expert Rodney C. Ewing discusses how the **U**nited **S**tates' failure to implement a permanent solution for nuclear waste storage and disposal is costing Americans billions of dollars per year. With the Trump-Kim Summit fresh in our minds, Americans are ready to confront nuclear challenges that have been on hold for decades. What many may not realize is that one of the biggest challenges is on the home front. Since the Manhattan Project officially began in 1942, the United States has faced ever-increasing stores of nuclear waste. Nuclear security expert Rodney C. Ewing, a professor of geological sciences in the School of Earth, Energy & Environmental Sciences (Stanford Earth) discusses how the United States' failure to implement a permanent solution for nuclear waste storage and disposal is costing Americans billions of dollars a year. Where does our nuclear waste come from, and what is being done with it? Broadly speaking, there are two types of nuclear waste. The first is spent fuel **from nuclear reactors used to generate electricity**. Those **reactors have left us with** about **80,000** metric **tonnes of used** spent **fuel,** and **we don’t have a way forward for the disposal of this waste**. It’s stored at more than 75 sites in 35 states around the country, so many of us have some in our state, including California. The second category is the waste generated by our nuclear weapons complex. That defense waste has accumulated since the earliest days of the Manhattan Project. The highly-radioactive waste from chemical processing is mainly stored in very large metal tanks. They are located at the Savannah River site in South Carolina, the Hanford site in Washington State, at Idaho National Laboratory in Idaho, and Nuclear Fuel Services site at West Valley in New York State. “ I think it’s **discouraging that we continue to release radioactivity to the environment because after more than 40 years we still have not developed a successful plan** for going;forward. ” Rodney C. Ewing

#### **In the US, nuclear fuel stays stranded. Even if there are solutions to management, they take too long to be effective**

**According to Allison Macfarlane of the University of British Columbia in 2023** [Allison Macfarlane is director of the School of Public Policy and Global Affairs at the University of British Columbia, Rodney C. Ewing is co-director of the Center for International Security and Cooperation at Stanford University. “Nuclear Waste Is Piling Up. Does the U.S. Have a Plan?” 3/6/23 Scientific American <https://www.scientificamerican.com/article/nuclear-waste-is-piling-up-does-the-u-s-have-a-plan/> AL🧚‍♀️]

The U.S., which led the way on managing nuclear waste in the 1980s and 1990s, has now fallen to the back of the pack. **About 88,000 metric tons of spent nuclear fuel from commercial reactors remain stranded at reactor sites**, and this number is increasing by some 2,000 metric tons each year. These 77 sites are in 35 states and threaten to become de facto permanent disposal facilities. **Without a geologic repository, there is no way forward for the final disposal of this highly radioactive material. Storing it in pools and dry casks at reactor sites is a temporary solution;** it is safe for decades, but not the millennia needed to isolate this radioactive material from the environment. **The present U.S. policy of indefinite storage at a centralized site is not a viable solution**, as it shifts the cost and risk to future generations. Outrageously, this money, actually collected from electricity ratepayers, not taxpayers, is being used to offset the national debt. **Even if the U.S. starts today, it will take decades to site, design and build a facility for disposal of its nuclear waste stockpile.** That process must accelerate now, before the reactors we need for their electricity run out of room for their growing inventories of highly radioactive waste.

**Increased waste seeps into our water supply, compromising the health of millions and causing a myriad of adverse health effects**

**Nicole Redvers of the University of North Dakota wrote in 2021 that** [Nicole Redvers (University of North Dakota School of Medicine & Health Sciences, Grand Forks, North Dakota, USA), Ann Marie Chischilly (Institute for Tribal Environmental Professionals, Flagstaff, Arizona, USA), Donald Warne (Institute for Tribal Environmental Professionals, Flagstaff, Arizona, USA), Manuel Pino (Scottsdale Community College, Scottsdale, Arizona, USA), and Amber Lyon-Colbert (University of North Dakota School of Medicine & Health Sciences, Grand Forks, North Dakota, USA), 3-26-2021, “Uranium Exposure in American Indian Communities: Health, Policy, and the Way Forward”, Environmental Health Perspectives, Volume 129, Issue 3, CID: 035002, <https://doi.org/10.1289/EHP7537> DOA 3/8/25] // SH

The majority of current research suggests that **chemical toxicity from** the intake of small quantities of **uranium through contaminated drinking water may cause damage to the cardiovascular system and kidneys** (Hon et al. 2015; Ali et al. 2019). **Chronic exposure** to even small amounts of uranium **may be associated with** some **cancers and**, at high exposure levels, **kidney disease** (Bjørklund et al. 2020). A preliminary overview of several potential health outcomes from ingested uranium via drinking water from human studies is reviewed below and in Table 1. This preliminary review is not meant to serve as a comprehensive etiological or epidemiological review of uranium’s health effects, as previously noted, but, instead, as a platform for further discussion on the potential health effects and relevance in AI communities referenced later in this commentary. Carcinogenic effects. Although uranium exposure has been weakly associated with some cancers, including bone cancer and leukemia, uranium is not currently classified as a carcinogen by the International Agency for Research on Cancer or by the National Toxicology Program (Keith et al. 2013). Most of the potential carcinogenic effects from uranium are thought to be due to acute radiation exposure rather than the chemical effects of ingestion (ATSDR 2013). Several studies since 2011, however, have described an association between ingested uranium via drinking water and cancer (Table 1). For example, recent ecologic studies have suggested that c**hronic exposure to uranium in drinking water may be related to an increase in the incidence of leukemia, kidney cancer, and lung cancer in women and colorectal cancer in men** (Wagner et al. 2011; Radespiel-Tröger and Meyer 2013)**. Banning and Benfer (2017) have described weak yet statistically significant positive correlations between exposure to uranium through drinking water and an increase in the incidence rates of tumors and growths, in addition to liver disease**, in Bavarian residents (Banning and Benfer 2017). In addition, a recent study by van Gerwen et al. (2020) stated that although there was no evidence of a significant correlation within the described ecological study, certain states evidenced high age-adjusted thyroid cancer incidence rate in geographic areas that were within close proximity to known uranium-contaminated sites (van Gerwen et al. 2020). Research investigating environmental uranium exposure and cancer has historically been inconclusive, often using ecologic exposure assessments with inconsistent case definitions and many not having adequately accounted for long latency periods (Canu et al. 2011; Keith et al. 2013). Long-term cohort studies would be a more effective way of assessing the chemical impact of uranium exposure on the development of various types of cancers (Corlin et al. 2016).

**The lives of millions are at stake, as the**

**EA concludes in 2012 that** Environment America, 1/24/2012, "Nuclear Power Plants Threaten Drinking Water for 49 Million Americans", https://environmentamerica.org/media-center/nuclear-power-plants-threaten-drinking-water-for-49-million-americans/ /HS

Beyond plastic Forests Take Action Donate Nuclear Power Plants Threaten Drinking Water for 49 Million Americans Media Releases January 24, 2012 Environment America Washington, D.C. – The **drinking water for 49 million Americans could be at risk of radioactive contamination from a leak or accident at a** local **nuclear power plant**, according to a new study released today by Environment America Research & Policy Center and the US Public Interest Research Group Education Fund. See map here, key below. “The danger of nuclear power is too close to home. The drinking water for 49 million Americans is too close to an active nuclear power plant,” said Courtney Abrams, the Clean Energy Advocate for Environment America. “An accident like the one in Fukushima, Japan or a more routine leak could spew cancer-causing radioactive waste into our drinking water.” The nuclear meltdown in Fukushima, Japan last year drew a spotlight on the many risks associated with nuclear power. After the disaster, airborne radiation left areas around the plant uninhabitable, and even contaminated drinking water sources near Tokyo, 130 miles from the plant. According to the new report, “Too Close to Home: Nuclear Power and the Threat to Drinking Water,” the drinking water for 49 million Americans is within 50 miles of an active nuclear power plant – the distance the Nuclear Regulatory Commission uses to measure risk to food and water supplies. Major cities, including New York, Boston, Philadelphia, San Diego, Cleveland and Detroit receive their drinking water from sources within 50 miles of a nuclear plant. Radiation from a disaster like the one in Fukushima can contaminate drinking water and food supplies, as well as harm our health. But disaster or no disaster, **a common leak at a nuclear power plant can** also **threaten** the **drinking water for millions** of people, and as our nuclear facilities get older, **leaks are** more **common**. In fact, **75 percent of U.S. nuclear plants have leaked tritium**, a radioactive form of hydrogen **that can cause cancer and genetic defects.** In the case of the Fukushima meltdown, large quantities of seawater were pumped into the plant to cool it, and contaminated seawater then leaked and was dumped back into the ocean, carrying radioactivity from the plant with it. Waterways like Lake Michigan, the Missouri River, and the Chesapeake Bay are just a few that provide cooling water for nuclear power plants and could be at risk.

**The second way nuclear energy destroys health is through mining.**

**Specifically, uranium mining harms indigenous communities as they are disproportionately made to work dangerous jobs and live near harmful substances**

**According to Teracita Keyanna in 2023**[Keyanna, Teracita, et al, Teracita Keyanna, a community member and member of the Red Water Pond Road Community Association. She grew up near an abandoned uranium mine in New Mexico The Health Impacts of Uranium Mining in Native American Communities Policy Brief. <https://nabpi.unm.edu/assets/documents/research/health-impacts-uranium-mining-policy-brief-final.pdf> DOA 3/8/25]

Up to **two thirds of the uranium deposits** that the United States claims **is on tribal land, and 80% of nuclear fuel cycles take place on tribal land** Additionally, **the workforce for uranium mining** and milling **has disproportionately been made up of Native American workers.** As a result, uranium extraction has remained outside of general public discourse in spite of the major intergenerational health impacts that are heavily concentrated in Indigenous communities and have often been brushed aside as collateral damage. Although Native American reservations make up only 5.6% of land area in the American West, **approximately one in five uranium mines are located within 6 miles of a reservation**, and more than **75% of uranium mines are located within 50 miles of a reservation. The disproportionate concentration of uranium extraction** and processing, coordinated misinformation, lack of safety measures, as well as federal and corporate inaction throughout uranium site life cycles, including after their abandonment, these mines **have left a legacy of health injustices in Indigenous communities**.10,

**This is exacerbated by the fact that indigenous peoples are exploited and misninformed**

**According to Siena Fouse of the Envrionmental Law Institute in 2020,**  [Siena Fouse, Intern, Research and Publications 6-24-2020, "An Ongoing Battle: Fighting the Impacts of Uranium Mining in Southwestern Indigenous Communities", No Publication, <https://www.eli.org/vibrant-environment-blog/ongoing-battle-fighting-impacts-uranium-mining-southwestern-indigenous>]

Indigenous communities in the Southwestern United States have been battling the impacts of uranium mining since the early 1940s. The geology of the Colorado Plateau was found to be rich in the radioactive mineral and drew mining to the area. **The U.S. Department of Energy (DOE) sought uranium to** [**develop nuclear weapons**](https://www.mdpi.com/2076-3263/5/1/15/htm) **during the Cold Wa**r, which fueled the interest of mining companies that opened uranium mines and mills on and around indigenous land. This was the start of an environmental justice issue spanning generations and continuing to impact indigenous communities today.**Indigenous communities were** [**not told**](https://www.liberationnews.org/resource-extraction-of-the-american-indigenous-population-uranium/) **about the health risks uranium and radiation posed even though scientists and government officials knew of its hazards at the time. Tribes agreed to host mine sites and were hired as miners. Indigenous miners were underpaid, unethically treated as test subjects, and forced to do dangerous work** without protective equipment. **Miners** and their families **were exposed to uranium** and radiation, **causing** [**health issues**](https://www.epa.gov/sites/production/files/2016-06/documents/atsdr_uranium_and_radiation_health_dec_2014.pdf) **like bone cancer, kidney damage, and lung cancer.**

**This is detrimental, as uranium mining leads tomany adverse health effects**

**Flavio Silva of the University of Rio Grande explained in 2021 that** [Flavio Manoel Rodrigues da Silva Júnior, Ronan Adler Tavella, Caroline Lopes Feijo Fernandes, Marina Dos Santos, March 16th, 2021, “Genetic damage in coal and uranium miners”, published in *Mutation Research/Genetic Toxicology and Environmental Mutagenesis* Volume 866, June 2021, 503348, accessed online at Science Direct, <https://doi.org/10.1016/j.mrgentox.2021.503348> DOA 3/27/25] // SH

Mining has a direct impact on the environment and on the health of miners and is considered one of the most hazardous occupations worldwide. **Miners are exposed to several occupational health risks, including** genotoxic **substances**, **which may cause adverse health effects**, **such as cancer.** This review summarizes the relation between DNA damage and mining activities, focusing on coal and uranium miners. The search was performed using electronic databases, including original surveys reporting genetic damage in miners. Additionally, a temporal bibliometric analysis was performed using an electronic database to create a map of cooccurrence terms. The majority of studies were performed with regard to occupational exposure to coal, whereas genetic damage was assessed mainly through chromosomal aberrations (CAs), micronuclei (MNs) and comet assays. The bibliometric **analysis demonstrated associations of** coal exposure with silicosis and pneumoconiosis, **uranium miners with lung cancer and tumors** and some associated factors, such as age, smoking, working time and exposure to radiation. **Significantly higher DNA damage in miners compared to non-exposed groups was observed** in most of the studies. The timeline reveals that classic biomarkers (comet assay, micronucleus test and chromosomal aberrations) are still important tools to assess genotoxic/mutagenic damage in occupationally exposed miners; however, newer studies concerning genetic polymorphisms and epigenetic changes in miners are being conducted. A major challenge is to investigate further associations between miners and DNA damage and to encourage further studies with miners of other types of ores.

**This increases the likelihood of death, as**

**Manuel Ansede concludes in 2023 that** Manuel Ansede, 8/16/2023, "A study with 300,000 workers in the nuclear industry suggests an increased risk of death from cancer", EL PAÍS English, https://english.elpais.com/science-tech/2023-08-17/a-study-with-300000-workers-in-the-nuclear-industry-suggests-an-increased-risk-of-death-from-cancer.html//HS

**Prolonged exposure to low doses of ionizing radiation is associated with a higher risk of death from cancer** than previously thought, **according to a study of** nearly **310,000 nuclear industry workers** in **France, the U**nited **K**ingdom, **and the** **U**nited **S**tates. The **mortality rate** from solid **tumors increases by 52%** at 10 years for each accumulated gray, a unit of absorbed radiation that is equivalent to 1,000 millisieverts, or about 10,000 chest X-rays. The individual risk, however, remains very low. Epidemiologist Amy Berrington, who was not involved in the research, provides an example. “For every 1,000 people exposed to 100 millisieverts of ionizing radiation — most nuclear workers are exposed to less than 10 millisieverts — there could be an extra 10 deaths, instead of five, on top of the more than 200 expected deaths from tumors produced by other causes,” Berrington explained to the Science Media Centre portal. “Twice a small risk is still a small risk,” stressed the epidemiologist, from the Institute for Cancer Research, in London.