On the Bright Side

"Opportunity Cost" Killing Nuclear Power Future

Excerpted from Umair Irfan analysis in *Scientific American*, June 3, 2016

"'All three generations of nuclear technology that are out there today require babysitting,' said Microsoft co-founder Bill Gates during a panel last month in Washington, D.C. 'The nuclear industry has never designed an inherently safe product.' …

"However, existing reactors are tacking into the wind, in terms of economics and politics. Vermont [socialist] Sen. and Democratic presidential hopeful Bernie Sanders has laid out a plan to decommission every reactor in the United States. …

"Mark Jacobson, an energy researcher at Stanford University who found that it's feasible for much of the world to run on wind, water and sunlight, acknowledged that nuclear energy has some carbon benefits but said it has an insurmountable drawback of opportunity costs, namely the billions of dollars needed upfront and the decades it takes to plan and build reactors. [See: "Stanford scientist unveils 50-state plan to transform US to renewable energy," *Stanford Report,* Feb. 26, 2014.]

"'If you're looking at just one technology in isolation, maybe you don't care about that opportunity cost,' [Jacobson] said. 'But when you're comparing the two technologies, that becomes relevant. If you have $1 to spend, would you rather spend that on nuclear or wind?'"

It is no longer a question of whether these 21st-century technologies can replace nuclear power and fossil fuels. The question is when.

—MICHAEL MARIOTTE, 1952–2016

Major Indian Firm Quits Twin Reactor Project, Cites "Investment Exposure"

Nalco (National Aluminum Company Limited), the giant aluminum corporation and government of India enterprise, abruptly withdrew its interest in construction of two large power reactors at Kakrapara in the Northwestern state of Gujarat.

Prior to its withdrawal from the project, Nalco's web site boasted that the company "has formed a Joint Venture (JV) with Nuclear Power Corporation of India Limited (NPCIL) for establishing two 700 MW nuclear power plants at an estimated investment of [$11.4 billion]." Nalco had planned a 26 percent stake in the new entity, NPCIL. The Government of India holds 80.93 percent equity of Nalco.

In 2012, the $7 billion aluminum company signed a memorandum of understanding with NPCIL to build the two new reactors at the Kakrapara Atomic Power Station. The cost of the project is currently estimated at $12 billion. The Pressurized Heavy Water Reactors (PHWRs) would be the 3rd and 4th reactors at Kakrapara. Units 1 and 2, both 220 Mw reactors, went online in 1993 and 1995 respectively.

Unreported in the *Business Standard* report was any mention of the long-standing, large-scale public protests involving thousands of arrests and mass jailings of opponents that have confronted the project since its inception.

"We have decided to pull out of the [joint venture] with NPCIL following a change in technology of the project. Initially, it was decided to build the plant with indigenous technology. But later, it was decided to use foreign technology. The foreign technology will not only be more expensive, the gestation period of the project will also be more and we are [not] in a mood to wait that long with so much of investment exposure," Nalco Chairman and Managing Director Tapan Kumar Chand told the press.

—*Business Standard*, May 30, 2016

Cambridge City Council Votes to Divest $1 Billion from Nuclear Weapons

In March, a unanimous vote of the Cambridge, Massachusetts City Council declared that the city would withdraw any portion of its $1 billion pension fund from "any entities that are involved in or support the production or upgrading of nuclear weapons systems."

Cambridge-area activists, university scientists, and students drew on the annual report of financial institutions involved in nuclear weapons manufacturing compiled through the Don't Bank on the Bomb initiative of Netherlands-based peace group PAX to make the case for a divestment resolution to the City Council.

Cambridge Mayor Dianne Simmons announced the decision, saying, "Not in our name! It's my hope that this will inspire other municipalities, companies and individuals to look at their investments and make similar moves."

Divestment policy examples and resources are available at dontbankonthebomb.com. —*Huffington Post*, Apr. 4; TruthOut, Apr. 11, 2016

Prince Tops Our Anti-Nuclear Playlist

By Kelly Lundeen

LUCK, WI—Four hours had passed in the Nukewatch office on April 21, 2016. I had been concerned with the scandals and disasters of nuclear weapons when I got a barrage of personal text messages. "I heard Prince passed on. Are you all okay?" Within an hour of the news of his death, I had five text messages in my inbox. I thought, "Why is the death of a pop star so important as to take me away from pondering the impending radioactive holocaust?"

The truth is I love Prince's music and have been dancing to it since I was five, or maybe younger. But, why should I care? In the office the conversation shifted. "What did Prince have to say about nuclear weapons?" As a five-year-old, I was not cognizant that trying to keep up with my older sister—in musical trends and fascination with Prince—that I was also being exposed to the nuclear hysteria captured in the song "1999."

"Everybody's got a bomb / We could all die any day/ But before I'll let that happen / I'll dance my life away."

It was all coming together. Prince had more to say about nuclear weapons than may be expected. Another more obviously political and lesser-known Prince song from 1981, "Ronnie, Talk to Russia," makes a rational appeal to then-President Reagan for diplomacy during the Cold War. In a circus-gospel-rock tune Prince advises:

"Ronnie, talk to Russia before it's too late / Before they blow up the world... / Dontcha. / Don't you blow up my world."

So, came the idea of a list of songs about nuclear weaons and, as it turns out, Nukewatch is not the first to compile such a list. There are far too many songs to include here, but these are some of our favorites—the serious, the depressing and the light-hearted—with an emphasis on the light-hearted. See nukewatchinfo.org for song links!

The Serious

"99 Red Balloons," Nena, 1983

This great 1980s pop song actually had a serious theme more blatantly anti-war in the English version of the song (Nena is German) in which balloons flying over the Berlin Wall (separating the ally-controlled West Germany from the Soviet-controlled East Germany) are taken for missiles provoking a nuclear war.

"Antinuclear," Miguel Ríos, 1983

A Spanish rock singer wrote a tribute to Norman Mayer called *Antinuclear.* Mayer was an anti-nuclear protestor who worked to promote a large-scale debate about nuclear disarmament. That was his demand when he threatened to blow up the Washington Monument in 1982. He was killed by police and later found to have no explosives whatsoever. Ríos sang:

"The world wouldn't listen... [They] made him an anti-nuclear martyr." (KL translation)

"No More Weapons," Steel Pulse, 2004

A roots reggae band better known for their anti-racist music directs this message to the former US president:

"There's no time to beat around the BUSH...We no want no weapons of mass destruction."

"Point Hope," Indigo Girls, 2005

This folk song highlights the nuclear war the US government has waged here at home against indigenous people at the Nevada nuclear test site.

"We sit and watch the bombs blow... Them government men boys had something so damn secret they had to hide it in the desert sand."

The Ominous

"The Priests of the Golden Bull," Buffy Sainte-Marie, 1992

Cree rock singer Buffy Sainte-Marie tells us who wins and who loses the nuclear war.

"Who brought the Bomb wrapped up in business cards / and stained with steak? / Reservations are the nuclear frontline; uranium poisoning kills / You say silver burns a hole in your pocket / and gold burns a hole in your soul / Well Uranium burns a hole in forever / it just gets out of control."

"Breathing," Kate Bush, 1980

This eerie ballad is sung from the perspective of a fetus considering the polluted and radioactive world it will be born into pleading, "Leave me something to breathe! We are all going to die without...breathing."

The Light-Hearted

"Party at Ground Zero," Fishbone, 1985

Referring to the original meaning of Ground Zero as the site of a nuclear explosion, this ska song may well be played at the Last Party along with "1999."

"Johnny, go get your gun, for the commies are in our hemisphere today / Ivan, go fly your MIG, for the Yankee imperialists have come to play."

"Atomic Nightmare," Talbot Brothers of Bermuda, 1987

While Prince's reflection on imminent nuclear war was urging for cool heads and dancing, the Talbot Brothers of Bermuda have another response captured in this upbeat calypso tune:

"Oh, you'll run, run, run like a son of a gun / I don't know where I'm going to go, but I'm really going to run."

"Future's So Bright I Gotta Wear Shades," Timbuk3, 1986

References to nuclear annihilation were lost when this pop hit became the theme song for the 1980s sitcom "Head of the Class." Only in the music video do these references become clear as it shows the nuclear flash marking an end to humankind with the synical twist that sunglasses might serve as protection.

"I'm doing all right, getting good grades / The future's so bright I gotta wear shades."

"So Long Mom, I'm Off to Drop the Bomb," Tom Lehrer, 1965

The sarcastic lyrics to this piano tune say it all:

"But though I may roam, / I'll come back to my home, / Although it may be / A pile of debris. / Remember, mommy, / I'm off to get a commie, / So send me a salami, / And try to smile / somehow."

***Nuclear Sí,* Aviador Dro, 1979**

A post-apocalyptic world is described in this song from the Spanish electronic band Aviador Dro which translates to "Nuclear, Yes!"

"Nuclear, yes! / Of course / Nuclear, yes! / Why not? / I want to bathe in seas of radiation / With clouds of strontium, cobalt and plutonium / I want to have lead casings / And mutant children riding motorcycles." (KL translation)

After the last song has played, the only difference between a light-hearted and an ominous song about nuclear weapons is the tune and the tone. At Nukewatch the depressing guides us, while the light-hearted keeps us going. Rock on!

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