

## Music of the Nuclear Age

1. Continuity: Nuclear weapons and energy are in the headlines again. Russia threatens a tactical nuclear bombing. Ukrainians fear contamination from an attack on their nuclear plant, the largest in Europe. We've heard this song before.

The program you're about to hear explores the historical background to these headlines, through music about nuclear bombs and nuclear power plants. We revisit these hot subjects through songs in many genres: country, western, blues, rhythm & blues, even calypso.

2. Music: "Leave The Atom Alone," Josephine Premice; "Atomic Energy," Sir Lancelot
3. Continuity: Since its beginnings, nuclear weapons and energy have been controversial. Some people are enthusiastic about the potential of nuclear energy: quiet, efficient with low carbon emissions. Others are bitterly opposed to both nuclear energy and weapons. Today, we'll go back to how nuclear weapons and energy began, and you can draw your own conclusions. For information about the songs played, visit [nuclearmusic.online](http://nuclearmusic.online).
4. Music: "Old Man Atom," Sons of Pioneers; "Talking Atom," Sons of the Pioneers; "Jesus Hits Like An Atom Bomb," The Pilgrim Travelers
5. Continuity (00:32): On the morning of August 6<sup>th</sup>, 1945, a B-29 bomber dropped the first nuclear bomb on Hiroshima, followed two days later by another over Nagasaki, Japan. In a few seconds, 139,000 people died in the first explosion and 50,000 more in the second; many more suffered and died in the long-term effects. The atomic age was upon us.
6. Effects: "Daisy," political ad for Lyndon Johnson
7. Effects: Explosion
8. Music: "When The Atom Bomb Fell," Karl & Harty
9. Continuity: Nuclear songs were being written as soon as July 1945, right after the bomb, dropped. Whether the second bomb, on Nagasaki, needed to be used at all is a complex historical question. Though musicians sang that the bomb "was the answer to our fighting boys' prayer," this music is

tinged with fear. Fear of it falling on you. Fear of a communist take-over. Fear science had reached too far and the genie wouldn't go back in the bottle. Some people just wanted to dig themselves a hole and crawl in.

10. Music: Arthur "Big Boy" Crudup "I'm Going To Dig Myself A Hole"
11. Effects: Civil Defense Spot, Bob Hope
12. Music: "Love That Bomb," Dr. Strangelove and the Fallouts
13. Continuity: The decision to drop the atom bomb onto Japan wasn't easy. Before that time, the US and Japan were expecting a full-scale land invasion of its islands. The pilot of the bomber, Paul Tibbets, later said that he was more worried about American casualties than the quarter of a million Japanese who died. President Truman insisted that an A-bomb was the only way to end the war without massive American casualties.
14. Effects: President Truman's speech
15. Music: "This Cold War With You," Floyd Tillman
16. Continuity: One way songwriters dealt with this fear was to make fun in romance and novelty songs.
17. Music: "A Bomb Bop," Mike Fern; "Thirteen Women (And Only One Man In Town)," Bill Hailey and His Comets
18. Continuity: As the atom bomb spread from country to country-- Russia, Britain, and France-- military planners decided one type of bomb wasn't enough. In 1952, on a Pacific island the first hydrogen bomb exploded, forty times more powerful than the one dropped on Hiroshima. Amidst the Korean War, the H-bomb was ultimately celebrated and feared.
19. Music: "The Hydrogen Bomb," Al Rodgers and His Rocky Mountain Boys
20. Effects: "Duck and Cover," Dick 2 ton Baker
21. Continuity: Starting in the early 1950s, scientists and scholars petitioned to stop further development of nuclear weapons. The movement gathered strength in 1961 with the Cuban Missile Crisis when Russia moved atomic weapons into Cuba and President Kennedy resisted.

22. Actuality: President Kennedy's inaugural address
23. Continuity: Americans were urged to dig fall-out shelters, essentially a hole in the ground with supplies to last (improbably) till the radiation passed. This unleashed a musical torrent of black humor.
24. Music: "Fall-Out Shelter," Mike and Bernie Winters; "Crawl Out The Fall Out," Sheldon Alman
25. Continuity: But fallout shelters didn't solve the problem. Only a successful push for nuclear disarmament could do that. So from the 1960s on, the peace movement steadily grew worldwide. "Peace in the World, or the World in pieces, was the slogan. Some felt that peace would come from religion or divine intervention.
26. Music: "Weapon Of Prayer," The Louvin Brothers
27. Continuity: Some say the era of nuclear warfare, and the Cold War, is over. It's not over. In 2022, threats of nuclear bombs resurfaced in the war between Russia and the Ukraine.  
  
Some might think of the songs just played as historical relics. Some might wonder, with the inventor of the telephone, "What has God wrought?" I have to ask, What have we learned from our nuclear past? Will the prospect of nuclear war be forever with us?
28. Music: "Then We'll Have Peace," Pete Seeger
29. Continuity: Nuclear weapons are only half the story. Now, we survey what the public has heard about nuclear energy in music. We'll hear rare recordings and review the sometimes-negative reaction to nuclear power. Songs about atomic energy tend to be biased; pro-nuclear-power songs are rare.
30. Music: "Great Atomic Power," The Louvin Brothers
31. Continuity: In the beginning of the nuclear age, there was optimism about what nuclear power could offer humanity—an apparently inexhaustible, inexpensive source of energy whose electricity would usher in a new age, the age of atomic power. Many hoped the technology that powered the bomb could be put to more positive uses. In 1952, seven years after the first atomic

bomb, the idea captured popular imagination as construction began on the world's first nuclear power station in England. Unfortunately the same year, 1952, brought the first meltdown, in which a nuclear power plant overheats and melts.

32. Music: "There's A Power," Buchanan Bros.

33. Continuity: The power generated by nuclear energy is immense - in some plants, enough electricity to power three-quarters of a million homes. A problem is that once the fuel is spent, it becomes nuclear waste and must be cooled and isolated from the environment for hundreds of thousands of years.

34. Continuity: These technologies emerged in the dark shadow of the Cold War, in an era which also produced film noir and existential angst. Songwriters sometimes turned nuclear power in humorous or apocalyptic directions. The combination of a centuries-old musical form, gospel, and the latest technology was a bit jarring.

35. Music: "Atom And Evil," Golden Gate Quartet

36. Continuity: In 1956, the world's first nuclear power station opened in England, as with all new technology, it was sometimes greeted with suspicion. "Relax," proponents of nuclear power said. "Don't worry."

37. Music: "Relax And Take It Easy," Tommy Duncan; "The Wild West Is Where I Want To Be," Tom Lehrer

38. Continuity: Relax. But not too much. That same year, 1957, a meltdown occurred at the Fermi plant, near Detroit. (Soon after, the first of six reactors in Fukushima opened in Japan.) Here, Gil Scott-Heron memorializes this event in a song "We Almost Lost Detroit."

39. Music: "We Almost Lost Detroit," Gil Scott-Heron

40. Continuity: In the 1950s, proponents pointed out that nuclear power produces no air pollution, greenhouse gas, or smog. They wrote fact sheets on newer, safer reactor designs. The meltdown near Detroit, the world's first "breeder reactor" that attempt to recycle the byproducts of nuclear-energy generation. The potential dangers of atomic power surfaced only gradually.

Maybe this technology wasn't such a good idea, some thought. What would the nuclear industry do with the resultant highly radioactive waste? Was it safe for those working with it? In 1974, the Kerr-McGee corporation was charged with falsifying safety records and endangering workers, including a woman, Karen Silkwood, whose car crashed on her way present evidence at a hearing about the plant.

41. Music: "Karen Silkwood," Pat DeCou and Tex LaMontan; "Overexposed," Rick Kirby and the Vigilantes
42. Continuity: Then came Three Mile Island. The nuclear power plant sits on an island in the Susquehanna River, about ten miles downstream from Pennsylvania's capital of Harrisburg. The plant there had already been problematic, with unscheduled shutdowns due to leaks, and rumors of falsified data. On March 28, 1979, a malfunction caused the reactor to shut down automatically, shooting steam out of a stuck-open valve. Some two million people were exposed. One hundred forty thousand people were evacuated. The damage took twelve years to decontaminate. The plug was pulled on atomic powers. It would be more than thirty years before a new power plant was licensed in the United States.
43. Music: "Plutonium," Malvina Reynolds; "What Have They Done To The Rain," Joan Buez
44. Continuity: Two weeks before the Three Mile Island accident, the nuclear disaster film *The China Syndrome* was released. The film starred Jane Fonda and Michael Douglas as reporters who accidentally filmed a nuclear incident the local plant tried to cover up.
45. Effect: *The China Syndrome*: excerpt
46. Continuity: Songwriters had grave doubt about the safety of this technology. Soon after the Three Mile Island debacle, political singers Pat DeCou and TexLa Montan sang this tune, "Radiation Nation."
47. Continuity: A bigger problem occurred in 1986, after the Chernobyl meltdown in the Ukraine. The initial emergency response, together with later decontaminations, involved a half million

personnel and cost 68 billion dollars, (adjusted for inflation). It will take until 2065 to complete the cleanup.

48. Music: “Chernobyl,” DJ Klippa

49. Effects: Civil defense broadcast

50. Continuity: By 1998, countries were beginning to decommission nuclear power plants over worries of health and safety. But in Japan, over fifty new reactors were built. Songs about stopping nuclear power grew increasingly strident.

51. Music: “Hanging Tree,” Pat DeCou and Tex LeMountan

52. Continuity: By the second decade of the 21<sup>st</sup> Century, nuclear power had become deeply integrated into the world’s energy economy. It provided approximately ten percent of all electricity used. That’s a great achievement, though every day more nuclear waste was created. And then came, Fukushima.

53. Music: “Fukushima,” Finn McGinn

54. Continuity: This time it was an earthquake in 2011, the most powerful one ever recorded in Japan. Waves fifty feet tall flooded the nuclear power plant in an accident as severe as Chernobyl. Emergency generators started to cool the reactor until a tsunami hit, creating hydrogen explosions. This time, contaminants were released into the air, land, and the Pacific Ocean. Japanese authorities admitted to lax standards and poor oversight, and decontaminated over a hundred areas and closed reactors. Radioactive water may still be seeping into the Pacific.

55. Music: “Fukushima,” A Small Spark Destroys a Forest

56. Continuity: Nuclear energy continues to provide stable power in many countries, though in the summer heat of 2022, the French were forced to shut reactors temporarily when water levels in rivers grew too low to cool them. The U.S still has the world’s largest number of nuclear stations – 92—which produce around 20% of American electricity. Despite concerns at meltdowns and unending nuclear waste, there’s no immediate alternative to replace this source of power. In 2022,

some countries stopped decommissioning their plants, so as to guarantee a stable source of energy after Russia cutoff much of Europe from its gas supplies.

57. Continuity: To what extent the world depends on nuclear power in the future and how it will store waste safely has yet to be determined. Though the energy demands of the world continue to grow, there's still resistance to nuclear-generated energy. A different technology, nuclear fusion, may offer a cleaner path, though scientists are not in agreement on its safety.

58. Continuity: Irish poet William Butler Yeats wrote "The Second Coming," after World War I:

Things fall apart; the center cannot hold;

Mere anarchy is loosed upon the world,. . . .

The ceremony of innocence is drowned the best lack all conviction,

While the worst are full of passionate intensity

. . . . And what rough beast, its hour come round at last,

Slouches towards Bethlehem to be born?

Some will see nuclear energy and weapons as that rough beast. This program was not meant to frighten you, nor to deliver the latest developments in atomic power, which include smaller reactors with more safeguards. Some will think atomic energy a salvation for humankind. It's not our job to decide, but yours. And then to do what you can about your opinion.

59. This program was produced by Dunaway Productions in New Mexico. Written and directed by David Dunaway, the program was co-produced with Matthew Melendy. Additional assistance by Marty Resendiz and John Berger. For more information about the songs played here, you can visit a website, **nuclearmusic.online**. From all of us, thanks for listening.