

Nuclear Connections

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The Bechtel Corporation: San Francisco's Engineers of Empire

The Bechtel Corporation is one of the largest engineering and construction firms in the world, and the fifth largest privately held firm in the United States. Headquartered in San Francisco, Bechtel has grown with California and with the U.S. empire, becoming a dominant player in new realms with each generation, from railroads and pipelines in California to airports and refineries in the Middle East, and from hydroelectric dams and shipyards to nuclear power and nuclear weapons. Today, Bechtel builds and manages huge petrochemical, transportation, and mining projects world wide and is one of the largest U.S. military contractors. Bechtel has built a significant part of the world we inhabit, at the same time becoming an economic and political power with the size and reach to play a significant role in shaping economic and technological choices that affect us all.

A key element of Bechtel's business is in the energy industry. From roots in general construction and railroads, Bechtel moved into constructing oil refineries, pipelines, and dams. During the New Deal Bechtel became a major federal contractor as part of the consortium that built the Hoover Dam. Bechtel built ships, shipyards, and an aircraft factory during World War II, including the yards that produced Liberty ships in Richmond and Marin County.

Bechtel's work building electricity infrastructure and its projects for the military gave Bechtel experience, capacity, and connections that it combined to become a leading participant in the post-World War II development of nuclear technology for both power generation and weapons. Bechtel had built infrastructure at Hanford, Washington for the secret Manhattan Project that developed the atomic bomb. It continued its government nuclear work in the early post-war years with construction and engineering for a prototype nuclear power reactor and fuel production processes at the government lab in Idaho, nuclear test-related work at the Nevada Test Site, and work on the early phases of what would eventually become the Lawrence Livermore National Laboratory, one of the two main nuclear weapons design labs.

At the same time, Bechtel was expanding its overseas operations, building petroleum, electric power, and transportation infrastructure in the Middle East. After doing refinery and pipeline work during the war for the Bahrain operations of U.S. oil companies, Bechtel began working for the Saudi royal family, building everything from railroads and highways to port facilities and electric power plants. As the official history on the company web site describes it,

“Bechtel was building the foundations of a partnership with Saudi Arabia that would last

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for decades. Steve Bechtel forged solid working relationships with King Saud, his son Prince Faisal, and a tight circle of Saudi advisers. In 1946, Bechtel would begin the task of constructing a modern nation in the Arabian Desert.”¹

As a major contractor for the U.S. government and development partner for key U.S. allies, and one of the largest engineering and construction firms in the world’s greatest industrial power during the years of its most rapid ascendance, Bechtel and its alumni became an integral part of the U.S. power structure. John McCone, who partnered with Bechtel in its WWII business enterprises, went on to serve as chairman of the Atomic Energy Commission and director of the Central Intelligence Agency. Bechtel general counsel Caspar Weinberger went on to serve as president Ronald Reagan’s defense secretary, and Bechtel Group president George Schultz as Reagan’s Secretary of State.

A full service nuclear contractor

Today, Bechtel is one of the world’s leading nuclear engineering and construction firms, providing construction support services for nuclear power plants around the world. According to its company web site, Bechtel has provided engineering and construction services at 88% of U.S. nuclear electricity generating plants. Bechtel built Southern California Edison’s San Onofre nuclear power plant and completed construction of Pacific Gas and Electric’s Diablo Canyon nuclear plant. Both plants are coming up for relicensing and, in the wake of the Fukushima disaster, face growing public opposition over the particular dangers of operating nuclear plants, each with storage pools full of highly radioactive spent fuel rods, in a seismically active region.

Nuclear Connections is a series of brief analyses that explores the relationship between nuclear institutions and the global economy and its power structures, with an emphasis on organizations and institutions with a physical presence in the San Francisco Bay Area and the American southwest. Look for additional *Nuclear Connections* pieces in the publications section of the What’s New page of the Western States Legal Foundation Web Site, at <http://wslfweb.org/whatsnew.htm>

On the military nuclear side, Bechtel is part of management groups for many of the facilities that manufacture, test, and maintain the U.S. nuclear arsenal. It is a member of the management teams at both the Los Alamos National Laboratory in New Mexico and the Livermore Laboratory 40 miles east of San Francisco, and also helps operate the Pantex plant in Texas, where nuclear bombs and warheads are assembled, refurbished, and dismantled, and the Y-12 plant in Tennessee, where the secondaries that provide much of the explosive power for thermonuclear weapons are made. The Bechtel Marine Propulsion Corporation operates the Bettis and Knolls Atomic Laboratories, which provide research and technical support for the Navy’s nuclear reactor-powered warships, including aircraft carriers and nuclear-armed ballistic missile submarines.

At Los Alamos and Y-12, Bechtel will play a major role in managing the two largest construction projects in the National Nuclear Security Administration’s (NNSA) ambitious plan to modernize the U.S. nuclear weapons complex. At Y-12 the government plans to build a large new Uranium Processing Facility (UPF), and at Los Alamos NNSA is planning a huge new

plutonium building called the Chemistry and Metallurgy Research Replacement facility (CMRR). The UPF is estimated to cost between \$4.2 billion and \$6.5 billion, the CMRR, between \$3.7 billion and \$5.9 billion. In its February 2012 budget request the Obama administration put the CMRR project on hold for at least five years, but as of this writing, in June 2012, allies of the nuclear weapons establishment in Congress are attempting to restore current funding for the project.²

With Lockheed Martin, Bechtel manages the Ronald Reagan Test Site at Kwajalein Atoll, the target for missile tests launched from Vandenberg Air Force Base on the central California coast. Equipped with a wide array of tracking and launch facilities, Kwajalein likely will play a central role in the development of the next generation of U.S. long-range missiles and other nuclear delivery systems. Kwajalein also is used for testing a variety of missile defense technologies. Bechtel has been involved in other aspects of missile defense as well, doing work on construction of ballistic missile interceptor sites at Vandenberg and Fort Greeley, Alaska.

In its construction and engineering work, Bechtel has played a significant role in the privatization of infrastructure. A Bechtel water privatization effort in Bolivia received a great deal of attention, mainly due to intense local opposition that thwarted the project. More broadly, Bechtel has billed itself as “a one-of-a-kind industry leader in infrastructure privatization,” not only providing engineering and construction work but arranging financing for infrastructure development projects in several countries.³ The combination of Bechtel’s long history of infrastructure work, Middle East experience, and penchant for privatized solutions also made it a good fit for the Bush administration’s approach to Iraq reconstruction, an effort where Bechtel was unable to fulfill original objectives for many of its contracted projects.⁴

Building a two-tier world

Bechtel has built much of the infrastructure underlying our current form of modernity in cities around the world, from the refineries and power plants that power our homes and offices to the highways and transit systems we use to travel between them. But the infrastructure Bechtel has built has been designed to serve a starkly two tier global economy and society. Indian Economist Amit Bhaduri described the urban development path most commonly chosen in the world of corporate globalization:

“Mammoth projects create the impression of urban gloss, with fancy express-ways, underground metros, flyovers etc. at public cost.

We take it for granted that many of these public utilities are essential for efficiency, saving time in travelling, improving the quality of life, even for attracting investment....

Manhattan-like world-class cities are set as our goals, when 25% to 60% of the urban population lives a subhuman existence in slums. So why this bias, and whom does it benefit? It certainly benefits the urban elite population, and leads to uncontrolled urbanization and mega cities with growing hunger for energy, water and other resources. Slums are cleared without providing resettlement options, poverty banished only from sight.”⁵

Bechtel is a central player in a circuit of investment and profit that emphasizes production and trade in goods that a fraction of the world's population can afford to buy. Big development projects of the kind Bechtel specializes in--such as oil, mining and metal facilities, airports, and nuclear power plants--are largely geared to supporting global production chains for this same international trade in goods consumed by a privileged minority. Like many other global corporations, Bechtel has grown rich building a global economy that has left much of humanity on the outside looking in. This global economy, even here in one of the wealthiest countries, creates a society characterized by islands of wealth in a sea of poverty.

With an environment strained to its limits and competition for oil and other key resources increasing, this way of life systematically generates desperation in hundreds of millions of human beings, and hence conflict and war. From Los Alamos to Kwajalein to Iraq, war, preparing for war and profiting from war's devastation all are profit centers for Bechtel and corporations like it. It is long past time for a conversation about how we will move towards a world that is both fair and ecologically sustainable, and in which governments no longer serve at the will of the wealthy and pour immense amounts of resources into weapons that risk all of our futures. And in this conversation, every human being on earth has a right to an equal voice.

Sources

Material on Bechtel history drawn from Bechtel Corporation web site, including company history, Building a Century <http://www.bechtel.com/Building-a-Century.html>; and from Laton McCartney, *Friends in High Places: The Bechtel Story: The Most Secret Corporation and How It Engineered the World* (New York: Simon and Schuster, 1988).

Material on Bechtel nuclear operations drawn from U.S. Department of Energy, National Nuclear Security Administration, *Fiscal Year 2011 Stockpile Stewardship Plan, Annex A*, May 2010; and from Bechtel Corporation fact sheet, "Bechtel: The First Name in Nuclear," http://www.bechtel.com/assets/files/PDF/1107_First-Name-in-Nuclear%281%29.pdf

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¹ Bechtel Corporation Web Site, *Building a Century: 1945- 1959: Bringing Energy to the World* <http://www.bechtel.com/BAC-Chapter-3.html>

² See "Senate Committee would Mandate Construction of Huge Additional Los Alamos Plutonium Facility over Pentagon, NNSA Objections," Los Alamos Study Group, May 25, 2012, http://www.lasg.org/press/2012/press_release_25May2012.html, and sources cited therein.

³ See "Engine of Enterprise: Bechtel Enterprises sets the pace in infrastructure privatization," Bechtel Corporation Web site publication, *Bechtel Briefs*, April 2002, <http://www.bechtel.com/assets/files/PDF/brief0402.pdf>

⁴ Dana Hedgpeth, "Bechtel's Projects Lacking In Iraq: Less Than Half Of Jobs Complete, Report Concludes," *The Washington Post* July 26, 2007.

⁵ Amit Bhaduri, "Special Economic Zones," *Seminar* #582, February 2008 a symposium on the recent economic policy initiatives http://www.india-seminar.com/2008/582/582_amit_bhaduri.htm