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Global Nuclear News

2017 ~2018

Global Nuclear News
2017 ~2018

The global race to command market shares for the use & sale of nuclear technology is at an all-time high – truly a renaissance for the United States.

This document provides just a small glimpse of existing & emerging news. We also provide a lead to a most significant piece of history (a source document reference) 'everyone nuclear' needs to study in this most meaningful sector.

Article link on applicable page.

11-01-17 ~ 11-22-17

	Headlines | Articles	Source
	Energy Nuclear News	
	Global Power Database	11-03-17, ENR, Richard Korman
	SMR International Summit 2018	03-01-18, NEI, Ben Moss UK
1	How Bechtel Limits Risk on Possible Big Plant-Vogtle Role	09-21-17, ENR, Richard Korman
2	Witness to the Origins of a Huge Nuclear Construction Flop	11-01-17, ENR, Christopher Hartz
3	Is Georgia's Project the Nuclear Revival's Last Gasp?	11-01-17, ENR, Pam Radtke Russell
4	Nuclear Energy In America Is Teetering on a Cusp – ANS	11-02-17, Forbes, James Conca
5	Companies Look Ahead & to SMRs as US Work Slows	11-03-17, ENR, Pam Radtke Russell
6	China Calls for Stronger co-op With US in next generation nuclear technology	11-05-17, Hindustan Times
7	Rolls-Royce to Conduct SMR Study for Jordan	11-09-17, WNN
8	A Successful Nuclear Step for Molten Salt Reactors	11-10-17, Forbes, James Conca
9	A mock reactor, a few expensive lasers, & the future of nuclear power in a Harmarville lab	11-13-17, Pittsburgh Post-Gazette, Lindsay Wise
10	Contract Signed for US Advance Manufacturing Centre	11-13-17, WNN via SmartBrief
11	Does Nuclear Power Have a Robust Future in the US?	11-13-17, WSJ, Rich Powell
12	Trump to Tap Nuclear Industry Lobbyist for US Energy Dept Job	11-15-17, Reuters, Reuters Staff
13	Nuclear & Coal are Essential for Reliable Energy	11-15-17, The Hill, Mike Moore
14	House Panel Advances Bills to Clean up S. Carolina Nuke Mess	11-15-17, AP News 13
15	Revealed: Inside Jordan's First Nuclear Research Reactor	11-21-17, The National, Daniel Bardsley
16	TVA Hopes to Get into SMRs	11-22-17, NE SmartBrief, E&E News

Other Nuclear News		
1	The US Uses Almost Half the World's Supply of MOLY-99, but Produces None	01-01-17, Shine Medical Technologies, website
2	Exclusive: Agency Responsible for US Nukes is Lax in Fighting Fraud, Report Says	05-01-17, McClatchy DC Bureau, Lindsay Wise
3	Navy Wide Incompetence & Not Hacking Caused the recent Navy Collisions	11-02-17, NextBIG Future, Brian Wang
4	LANAL MegaPower Reactor	11-16-17, NextBIG Future, Brian Wang
5	Small & Passively Safe Nuclear Reactors for NASA & Military Missions	11-16-17, NextBIG Future, Brian Wang

Sources

ENR Russellp@bnpmedia.com

Pam Radtke Russell

Senior Editor Pam Radtke Russell is a New Orleans-based journalist with more than a decade covering energy and environmental issues for ENR, CQ Roll Call in Washington D.C. and the Times-Picayune in New Orleans. She was part of the Times-Picayune team that worked from Baton Rouge after Hurricane Katrina and was awarded two Pulitzer Prizes for journalism in 2006 for public service and breaking news.

ENR LinkedIn

Scott Judy

Scott Judy is Deputy Editor for Regions, and editor of ENR Southeast, one of Engineering News-Record's 10 Regional publications. His roughly 27 years as a construction journalist began with an 11-year stint covering Midwest construction projects. In 2000, Judy helped launch the publication now known as ENR Southeast. He often delves into controversial aspects of the construction industry such as bankruptcies and fatal accidents, and wishes he would never have to cover another accident but suspects that he might.

ENR LinkedIn

Richard Korman

One of the biggest risks Deputy Editor Richard Korman ever took was starting ENR's Risk Review newsletter, which he has edited since 2012. He also helps run ENR's business coverage, selects ENR's editorials and submitted viewpoints and oversees editorial content on ENR.com. In 2015 he won the Timothy White Award from American Business Media for investigations of individual surety fraud and workplace bullying. Richard is the author of a biography of inventor Charles Goodyear and his freelance writing has appeared in the New York Times, Business Week and the websites of The Atlantic and Salon.com. Although he plays piano and basketball with equal ineptitude, Richard admires skill, especially when it comes to construction projects that finish on time and budget, pay before the earth completes its annual orbit of the sun, record zero injuries and assign risk to parties who control an activity or willingly finance the risk.

Forbes
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James Conca, CONTRIBUTOR

I write about nuclear, energy and the environment FULL BIO

Opinions expressed by Forbes Contributors are their own.

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Wall Street Journal
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By Rich Powell

Rich Powell PHOTO
CLEARPATH

McClatchy DC Bureau Lindsay Wise lwise@mcclatchydc.com **The Hill** Mike Moore **Reuters** **Pitts Post-Gazette** Anya Litvak, 412-263-1455 alitvak@post-gazette.com	**World Nuclear News** **Next Big Future** Brian Wang **Nuclear Energy SmartBrief** **The National** Daniel Bardsley **Associated Press (AP) News 13**

US 11-03-17

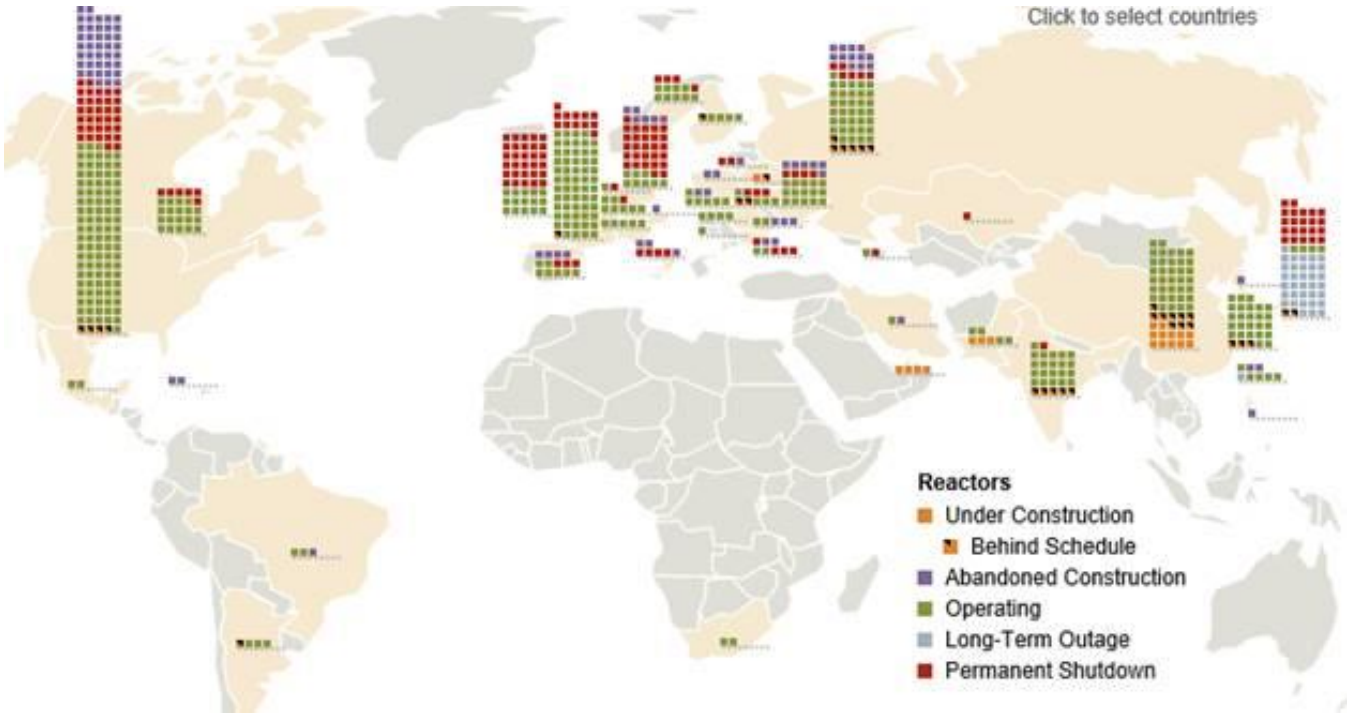
ENR

Global Nuclear Power Database

Introduction | FAQ

World Nuclear Power Reactor Construction 1951–2017

Since 1951, 41 nations engaged in the construction of 754 nuclear reactors. Therefore, a long history and a rich experience in the field can teach us valuable lessons for the future.



World Nuclear Industry Status Report | Bulletin of the Atomic Scientists | Pulitzer Center | VISIONSCARTO

Interactive visualization developed by World Nuclear Industry Status Report (WNISR) and Visionscarto for the Bulletin of the Atomic Scientists with support of the Pulitzer Center on Crisis Reporting

Richard Korman https://thebulletin.org/global-nuclear-power-database

03-01-18 SMR International Summit in Atlanta

NUCLEARENERGY INSIDER

8th Annual

International SMR and Advanced Reactor Summit 2018

27-28 March 2018 • Westin Buckhead, Atlanta

http://www.nuclearenergyinsider.com/international-smr-advanced-reactor/brochure-thank-you.php

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US 09-21-17

ENR

Nuclear Power

How Bechtel Limits Risk on Possible Big Plant-Vogtle Role

Georgia Power's new prime contractor on the costly project has a carefully outlined role

The Vogtle project team achieved the milestone of placing the first steam generator, weighing 1.4 million pounds, inside Unit 3's containment vessel.

PHOTO: COURTESY OF GEORGIA POWER

Under its assessment of the task, Bechtel sized up responsibility for craft labor, field engineering, equipment, construction quality control and contract administration, among other duties.

In a Georgia Public Service Commission-required document, titled "Georgia Power Co.'s 17th Annual Construction Monitoring Report for Plant Vogtle Units 3 and 4," Bechtel appears prepared to perform about $4.4 billion worth of work under its control. The contract appears to be a non-at-risk pact to manage direct labor at the site near Waynesboro for a fee of about $240 million, according to documents filed with the state public service commission by Georgia Power. Additionally, Bechtel stands to earn an extra $120 million in incentive payments, according to Macquarie Securities. That unconfirmed figure was published in Macquarie's latest analysis for investors in Southern Co., Georgia Power's parent.

"The Bechtel estimate came largely in line with that of [Southern Co. and Georgia Power] though Bechtel's schedule on average was six months shorter," wrote Macquarie's analysts. The incentive payment is owed if Bechtel "delivers on its ambitious schedule," the company stated.

Under its assessment of the task, Bechtel sized up responsibility for craft labor, field engineering, equipment, construction quality control and contract administration, among other duties. The company specifically didn't evaluate subcontracts, design, engineering, and possible delays, defects or resulting rework. Nor did Bechtel assess procurement and site delivery and related rework, startup and commissioning, fuel-related issues, site security, or overall project integration and management.

Table 5-12. Summary of Construction Cost Assessment

Cost Category	Hours (in 1,000s)	Estimated Cost (in 1,000s)
Direct Craft Labor	23,955	$1,149,040
Field Indirects	12,589	$624,575
Field Non-Manual Services	11,032	$1,400,405
Home Office Services	39	$6,667
	Subtotal	$3,180,687
Escalation		$128,497
Taxes, Bonds, Other		$46,310
Construction Contingency		$409,733
Craft Per Diem and Incentives		$418,956
Fee		$240,000
	Total	$4,424,183

Source: Georgia Power Co.'s 17th Annual Construction Monitoring Report for Plant Vogtle Units 3 and 4

Prime contractor Westinghouse brought Fluor Corp. on to the project as a non-at-risk white knight after The Shaw Group and then Chicago Bridge & Iron shed their at-risk contracts to escape mounting losses at Vogtle and its twin in South Carolina, the V.C. Summer project. Both jobs featured Westinghouse's new AP1000 reactor design.Then, in March, Westinghouse filed for bankruptcy protection. And Fluor, working under Westinghouse, could not produce the hoped-for results. With Southern Co.'s nuclear unit, Bechtel appears poised to step in to oversee construction as the manager.

Richard Korman https://www.enr.com/articles/42734-how-bechtel-limits-risk-on-possible-big-plant-vogtle-role

US 11-01-17

ENR

Risk Management

Witness to the Origins of a Huge Nuclear Construction Flop

An inside account from 2010 of events that led to the Westinghouse bankruptcy

Christopher Hartz is an early eyewitness to the twin projects that punctured the hope for a "nuclear renaissance" and drove Westinghouse into bankruptcy.

For 14 tumultuous months, from late 2009 to 2011, Hartz worked for Shaw Nuclear Services, the main subcontractor to Westinghouse on its new Georgia and South Carolina reactor projects. With the South Carolina project now canceled and the Georgia project billions of dollars over budget and years late, Hartz's account of what he saw and experienced in Shaw Nuclear's Charlotte, N.C., office provides a new channel for understanding the traumatic infancy of a slow-developing disaster.

"I wasn't a whistle-blower. I was just a senior procurement manager who was concerned."

– Christopher Hartz, former Shaw Nuclear procurement quality-assurance manager

Looking back, Hartz now sees the incident as a symbol of all that was wrong in Shaw's approach to the projects. "It was a precursor," says Hartz. One of many, as it turned out. To build the first new nuclear reactors in the U.S. in three decades—South Carolina's V.C. Summer Units 2 and 3 and Georgia's Plant Vogtle Units 3 and 4—the design and construction team would face a steep learning curve. However, says Hartz, learning wasn't much of a priority in the rush to start work at Lake Charles. "They were clueless" about the complex geometry of nuclear welds, the nuclear supply chain and the need for a nuclear safety culture, he notes, adding, "I wasn't a whistle-blower. I was just a senior procurement manager who was concerned."

Richard Korman https://www.enr.com/articles/43325-witness-to-the-origins-of-a-huge-nuclear-construction-flop

US 11-01-17

ENR

Power Plant Construction

Is Georgia's Project the Nuclear Revival's Last Gasp?

The construction, engineering and fabrication issues raised by Christopher Hartz and detailed here by ENR applied to both the Plant Vogtle and V.C. Summer nuclear expansion projects. Currently, though, those projects are facing very different political environments.

In South Carolina, a political firestorm continues to surround the cancellation of the V.C. Summer expansion project.

In South Carolina, a political firestorm continues to surround the cancellation of the V.C. Summer expansion by project co-owners South Carolina Electric & Gas (SCE&G) and Santee Cooper. On Oct. 28, for example, SCANA Corp.—the parent of SCE&G—was adamantly denying a report that the utility had "ousted" chief executive Kevin Marsh and COO Stephen Byrne as a result of the bungled project.

"No senior executives were terminated, nor did any resign or retire," a SCANA spokesman told ENR.

That was just the latest dustup. Politicians are continuing to hold hearings in Columbia about the bungled job and its impact on ratepayers, and the Charleston Post & Courier has reported that SCANA is in "preliminary talks" with the state about how much ratepayers will be forced to pay.

The impact on ratepayers was a primary factor in Santee Cooper's decision to cancel the project, since roughly 18% of customers' monthly bills go toward the nuclear expansion's costs. As Santee Cooper spokeswoman Mollie Gore told ENR at the time it canceled the project: "We would have to raise rates an additional 41% to complete both units and 37% to finish just one unit."

https://www.enr.com/articles/43327-is-georgias-project-the-nuclear-revivals-last-gasp

US ANS 11-02-17

Forbes

via SmartBrief

Nuclear Energy In America Is Teetering On A Cusp

The American Nuclear Society held its Annual Winter Meeting in Washington D.C. this week, and our nuclear [+]

Nuclear in America is on a cusp between two very different paths. One path leads to continued global leadership. The other leads to a slow fading of our nuclear program to that of a third-rate power, leaving Russia and China to lead the world.

Given that the global nuclear power industry is set to expend over $1.5 trillion by 2030, it certainly is important that the United States maintains itself as a leader in this field. We have the largest, safest and the most effective nuclear program in the world. Our nuclear power program, the Nuclear Regulatory Commission and our non-proliferation statutes have set the norms and expectations for the world. And the world is generally following them.

James Conca jim@ufaventures.com

https://www.forbes.com/sites/jamesconca/2017/11/02/nuclear-energy-in-america-is-teetering-on-a-cusp/#559230af7686

US 11-03-17

ENR

Power Plant Construction

Companies Look Abroad and to Small Nuclear Reactors as U.S. Work Slows

The new projects are in India, China and Russia

November 3, 2017

Pam Radtke Russell

KEYWORDS nuclear power / Nuclear Power Plants

Reprints

5 0

Don't tell Bill Gates, Fluor Corp. or China that nuclear power is on the wane. And certainly don't mention the trend to the companies that are developing more than 90 advanced nuclear technologies or the 15 countries building 60 reactors.

While economic, construction, engineering and regulatory factors make it unlikely that—for years, if ever again—another large nuclear plant will be built in the U.S., several companies are spending millions of dollars to develop different nuclear technologies and small modular designs that may prove to be cheaper, easier to build and more flexible in their capacity.

And the factors that make big nuclear difficult in the U.S., like cheap domestic natural gas, aren't hampering new builds in China, Korea, India and elsewhere.

Pam Radtke Russell Russellp@bnpmedia.com

https://www.enr.com/articles/43330-companies-look-abroad-and-to-small-reactors-as-us-work-slows

US & China 11-05-17

hindustantimes.com

China calls for stronger co-op with US in next-generation nuclear technology

The announcement came from Chinese premier Li Keqiang ahead of US President Donald Trump's visit to China. Trump is scheduled to hold talks with President Xi Jinping.

WORLD Updated: Nov 05, 2017 17:13 IST

Press Trust of India, Beijing

Chinese Premier Li Keqiang meets Microsoft co-founder and philanthropist Bill Gates at the Zhongnanhai government compound in Beijing on November 3.(AFP Photo)

- Molten Chloride Fast Reactor Program – Simulated Fuel Salt Supply
- Traveling Wave Reactor Program – Fuel Development and Fabrication

http://www.hindustantimes.com/world-news/china-calls-for-stronger-co-op-with-us-in-next-generation-nuclear-technology/story-KAjCtq9Wz5rYOdOH5zBi0I.html

UK 11-09-17

wnn world nuclear news

Rolls-Royce to conduct SMR study for Jordan

Rolls-Royce said today it has signed a memorandum of understanding with state-owned Jordan Atomic Energy Commission (JAEC) to conduct a technical feasibility study for the construction of a Rolls-Royce small modular reactor (SMR) in the Middle Eastern country. The signing took place today at the British Embassy in Paris between Alan Woods, strategy and business development director at Rolls-Royce, and Kamal Araj, JAEC vice chairman.

http://www.world-nuclear-news.org/NN-Rolls-Royce-to-conduct-SMR-study-for-Jordan-09111702.html

Canada 11-10-17

Forbes

via SmartBrief

A Successful Nuclear Step For New Molten Salt Reactors

INTERNATIONAL

Molten salt reactor review is important step toward clean energy

OPINION

Terrestrial Energy's Integral Molten Salt Reactor completed the first phase of design review by the Canadian Nuclear Safety Commission and is the only advanced reactor project in the invitation-only stage of the US Energy Department's loan guarantee program. The molten salt reactor boasts many advantages and its development is promising progress toward reducing carbon emissions, James Conca writes.

Forbes (11/10)

James Conca
https://www.forbes.com/sites/jamesconca/2017/11/10/a-successful-nuclear-step-for-new-molten-salt-reactors/#7a03e7557e32

US 11-13-17

Pittsburgh Post-Gazette via SmartBrief

A mock reactor, a few expensive lasers, and the future of nuclear power in a Harmarville lab

Researchers study risks of SMRs

Energy risk consultancy Pittsburgh Technical is studying small modular reactors using a mock reactor at the University of Pittsburgh Applied Research Center. By testing the risks, researchers hope to influence the regulations for SMRs to help manage the time and cost to build them.

Pittsburgh Post-Gazette (11/10)

Anya Litvak alitvak@post-gazette.com 412-263-1455

http://www.post-gazette.com/powersource/policy-powersource/2017/11/10/A-mock-reactor-a-few-expensive-lasers-and-the-future-of-nuclear-power-in-a-Harmarville-lab/stories/201711080018

US 11-13-17

Nuclear Energy SmartBrief

wnn world nuclear news

Contract signed for US advanced manufacturing centre

10 November 2017

NuScale Power and Concurrent Technologies Corporation (CTC) have signed the initial contract for the new Centre for Advanced Nuclear Manufacturing (CANM). The contract covers prototype work for manufacturing NuScale's helical coil steam generators, a major component in the NuScale small modular reactor (SMR) design that is under certification review by the US Nuclear Regulatory Commission.

Related

- NuScale history w design applicati

http://www.world-nuclear-news.org/NN-First-contract-signed-for-US-advanced-manufacturing-centre-10111701.html

US 11-13-17

THE WALL STREET JOURNAL.

Does Nuclear Power Have a Robust Future in the U.S.?

Supporters say reforms would allow the industry to scale up and reduce costs. But skeptics say market forces working against the industry are too strong.

Rich Powell, executive director of the ClearPath Foundation, a nonprofit that promotes conservative clean-energy solutions, believes nuclear energy has a robust future in the U.S. Arguing the other side, Jason Bordoff, a former senior director with the National Security Council and special assistant to President Barack Obama, believes nuclear's future to be far less certain.

YES: It's Competitive and Necessary

By Rich Powell

Rich Powell PHOTO: CLEARPATH

The future of U.S. nuclear power is bright—and nonnegotiable.

A robust civilian nuclear sector is mandatory for the U.S. to remain a major geopolitical, economic, military and environmental leader. After decades of policy neglect, Washington is finally addressing what is both a national and global necessity and a tremendous opportunity.

Bipartisan political support is growing to reform new reactor licensing and improve tax incentives for new nuclear facilities, led in Congress by clean-energy advocates as well as national-security and energy-reliability hawks.

Bill Gates -backed TerraPower also has potential. It is working with Southern Co. to develop TerraPower's Molten Chloride Fast Reactor, a design that potentially has significant cost benefits compared with conventional generators. There is also NuScale Power LLC and its small modular nuclear reactor, which can be scaled anywhere from 50 megawatts to 600 megawatts of capacity and which will likely be operating commercially by 2026.

The goal for each of these companies is to export its technologies. With forecasts of as much as $10 trillion in global investment in low-emissions power technology over the coming decades, major investors and technology developers are paying attention.

The Energy Department recently announced that it will target advanced nuclear technologies for funding with the same highly successful approach it has used through its research program known as Advanced Research Projects Agency-Energy, or ARPA-E.

https://www.wsj.com/articles/does-nuclear-power-have-a-robust-future-in-the-u-s-1510628700

reports@wsj.com

US 11-15-17

REUTERS

#OIL REPORT NOVEMBER 15, 2017 / 6:08 PM / 2 DAYS AGO

Trump to tap nuclear industry lobbyist for U.S. Energy Dept job

Reuters Staff 1 MIN READ

WASHINGTON, Nov 15 (Reuters) - President Donald Trump plans to nominate Melissa Burnison, a nuclear energy industry lobbyist, to serve as assistant secretary in charge of congressional and intergovernmental affairs at the U.S. Energy Department, the White House said on Wednesday.

Burnison is currently director of federal programs for the Nuclear Energy Institute, "where she plans, directs and executes legislative strategies for nuclear energy programs and policies on behalf of the nuclear energy industry," the White House said in a statement.

Previously, she was a senior adviser at the Energy Department and at the U.S. House of Representatives' Committee on Natural Resources, where she advanced legislation to expand U.S. energy production and jobs, the statement said.
(Reporting by Eric Walsh; Editing by Tom Brown)

Our Standards: The Thomson Reuters Trust Principles.

US 11-15-17

THE HILL

Nuclear and coal are essential for reliable energy

BY MIKE MOORE, OPINION CONTRIBUTOR — 11/15/17 05:00 PM EST
THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL

© Getty Images

When a big storm is coming, people run out to the grocery store to stock up on essentials, in case they can't get back to the store for a few days. Critical industries typically build the same thing into their planning, because they need to be able to keep operating if there's a big storm or other emergency.

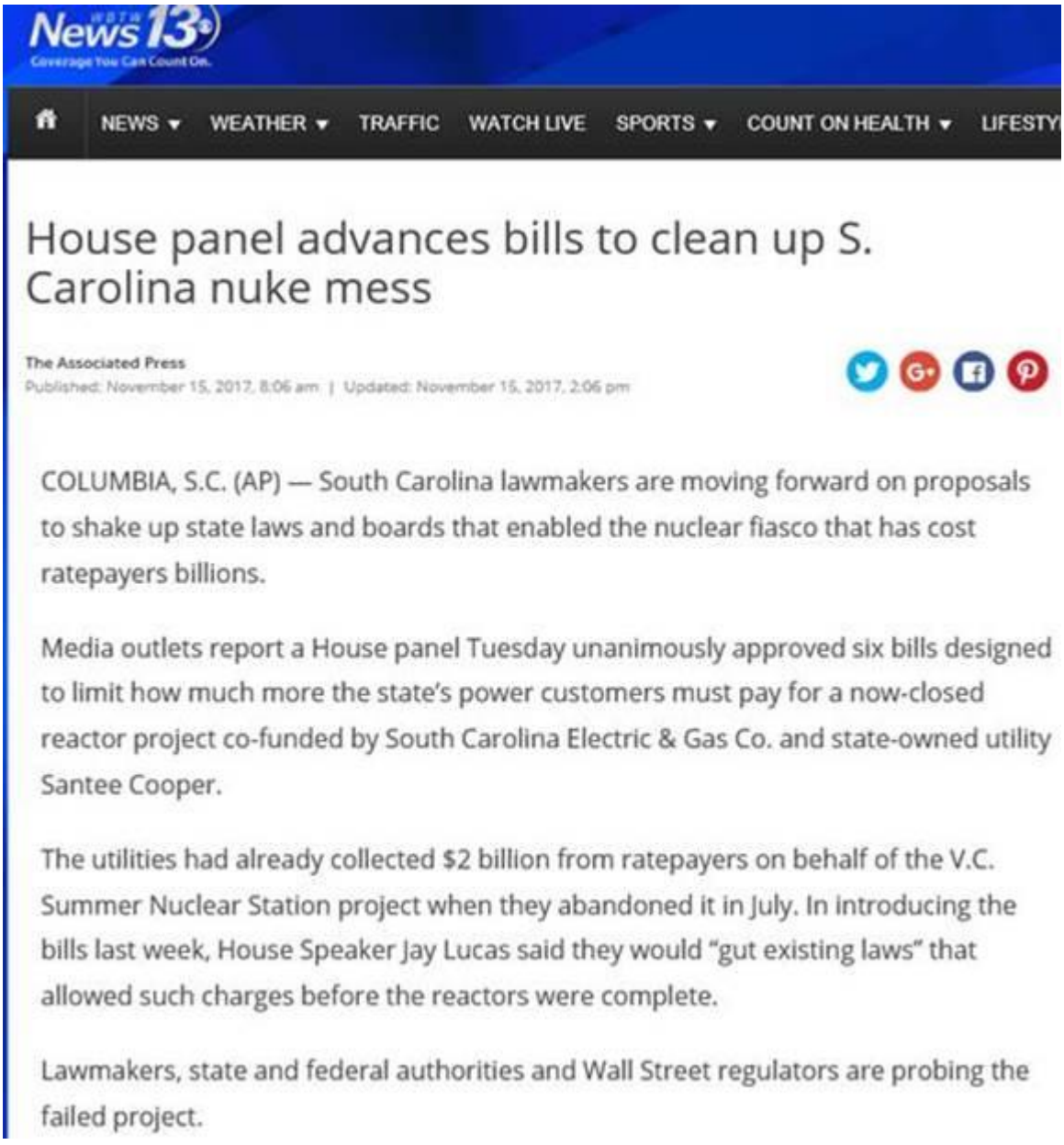
Consider electricity. The two main kinds of power plants that have powered the country through the past several decades — coal and nuclear — have fuel on site. Nuclear plants can run for about 18 months before refueling. Coal plants keep a 30 to 90 day coal supply on hand in case of supply disruption.

Mike Moore is a managing partner at East-West Strategic Advisors, a global energy consultant.

www.thehill.com

US AP News13 11-15-17 **via SmartBrief**

US V.C. Summer - Nuclear Power Plant



News 13
Coverage You Can Count On.

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House panel advances bills to clean up S. Carolina nuke mess

The Associated Press
Published: November 15, 2017, 8:06 am | Updated: November 15, 2017, 2:06 pm

COLUMBIA, S.C. (AP) — South Carolina lawmakers are moving forward on proposals to shake up state laws and boards that enabled the nuclear fiasco that has cost ratepayers billions.

Media outlets report a House panel Tuesday unanimously approved six bills designed to limit how much more the state's power customers must pay for a now-closed reactor project co-funded by South Carolina Electric & Gas Co. and state-owned utility Santee Cooper.

The utilities had already collected $2 billion from ratepayers on behalf of the V.C. Summer Nuclear Station project when they abandoned it in July. In introducing the bills last week, House Speaker Jay Lucas said they would "gut existing laws" that allowed such charges before the reactors were complete.

Lawmakers, state and federal authorities and Wall Street regulators are probing the failed project.

http://wbtw.com/ap/house-panel-advances-bills-to-clean-up-s-carolina-nuke-mess/

Israel 11-21-17

The National via SmartBrief

Revealed: Inside Jordan's first nuclear research reactor

The National visits the Jordan Research and Training Reactor, which produces radioactive isotopes for industrial applications.

The main control room at the Jordan Research and Training Reactor, where there must always be at least two staff member, even when the reactor is not operational. Courtesy Jordan Research and Training Reactor

The walls inside the cavernous main hall of the Jordan Research and Training Reactor are painted yellow, but the water filling the 10-metre-deep pool in the centre of the room gives off the electric blue glow characteristic of these units.

The water is demineralised to prevent it from becoming radioactive and to reduce the risk of corrosion to the structures that house this plant's key feature: uranium material located, out of sight and encased in aluminium, in the pool's eerie depths.

The National was given access into the nuclear training facility that is the country's first, and the first unit exported by South Korea.

During the visit, the reactor is shut down, but since this plant went "critical" - meaning it moved into a configuration in which nuclear fission could occur and be maintained on its own - for the first time in April last year, a minimum number of staff must be on site 24 hours a day, seven days a week, including at least two people in the main control room.

"We maintain the safety and security of our facility in accordance with the highest international standards," said Dr Samer Kahook, the JRTR's manager.

https://www.thenational.ae/uae/science/revealed-inside-jordan-s-first-nuclear-research-reactor-1.677333

Daniel Bardsley

November 20, 2017

Updated: November 21, 2017 09:25 AM

US 11-22-17

TVA - SMR

November 22, 2017

FOLLOW SMARTBRIEF

Nuclear Energy **SmartBrief**

News about the nuclear technologies industry SIGN UP · FORWARD

TOP STORY

TVA hopes to get into SMRs

The Tennessee Valley Authority, which started up its Watts Bar 2 nuclear reactor last year, would like to add small modular reactors to its fleet and has submitted a permit to the Nuclear Regulatory Commission for the technology. TVA is almost at the halfway point of a 10-year plan to improve operations and finances.

E&E News (subscription required) (11/20)

US 01-01-17

SHINE Medical Technologies

The U.S. uses almost half the world's supply of moly-99, but produces none.

The U.S. is completely dependent on foreign producers for molybdenum-99 (Mo-99 or moly-99; pronounced "molly-99")–a medical ingredient used to diagnose and treat 56,000 American patients per day. Over 95% of global supply of moly-99 is supplied from only four processing facilities located in Australia, Europe, and South Africa. Since moly-99 decays at a rate of approximately 1% per hour and cannot be stockpiled, without a domestic supply, American patients are relying on foreign governments to deliver the moly-99 they need. Help SHINE protect American patients.

http://shinemed.com/medical-isotope-producer/

US DOE 05-01-17

McClatchy DC BUREAU

CONGRESS

EXCLUSIVE: Agency responsible for US nukes is lax in fighting fraud, report says

BY LINDSAY WISE
lwise@mcclatchydc.com
MAY 01, 2017 10:00 AM
UPDATED MAY 01, 2017 12:36 PM

WASHINGTON — The U.S. Department of Energy isn't doing enough to cut back on the risk of fraud among its many contractors, according to a government audit obtained by McClatchy.

The nonpartisan Government Accountability Office issued the audit, requested by Sen. Claire McCaskill, D-Mo., after high-profile incidents of fraud by the DOE's contractors, including two at the Hanford Site nuclear reservation in Washington state.

In one case, employees of contractor Fluor Hanford Inc. were accused of receiving kickbacks for hundreds of wasteful purchases from 2003 to 2008.

Fluor paid $4 million to settle with the government.

In the second case, contractors at Hanford — Bechtel National and AECOM — agreed to pay $125 million to settle a lawsuit over allegations that they had charged the DOE for 13 years for subpar parts that weren't compliant with the agency's strict standards for nuclear facilities.

The companies have denied wrongdoing. But these cases and others over the years underscore the challenges facing the DOE, which relies more heavily on contractors than any other civilian agency in the federal government.

About 90 percent of the DOE's $27 billion annual budget goes to contracts and major capital asset projects. Since 1990, the GAO has flagged the agency's poor management of its contractors as an area at high risk for fraud, mismanagement and abuse of taxpayer dollars.

"The Department of Energy is responsible for maintaining large parts of our nuclear arsenal, and an inability or unwillingness to root out contracting fraud endangers not only taxpayer dollars but our national security," McCaskill, a former auditor, said in a statement. "The most troubling part is that the agency seems unwilling to acknowledge this is a problem."

Lindsay Wise lwise@mcclatchydc.com

US 11-02-17

Navy wide incompetence and not hacking caused the recent US Navy collisions

brian wang November 2, 2017

The Officer of the Deck and bridge team failed to comply with the International Rules of the Nautical Road. Specifically:
FITZGERALD was not operated at a safe speed appropriate to the number of other ships in the immediate vicinity.
FITZGERALD failed to maneuver early as required with risk of collision present.

FITZGERALD failed to notify other ships of danger and to take proper action in extremis.

Watch team members responsible for radar operations failed to properly tune and adjust radars to maintain an accurate picture of other ships in the area.

Watchstanders performing physical look out duties did so only on FITZGERALD's left (port) side, not on the right (starboard) side where the three ships were present with risk of collision.

Key supervisors responsible for maintaining the navigation track and position of other ships: Were unaware of existing traffic separation schemes and the expected flow of traffic. Did not utilize the Automated Identification System. This system provides real time updates of commercial ship positions through use of the Global Positioning System.

* The bridge crew – including the commander – didn't know how the helm worked on the USS McCain.

Much of the track leading up to the Singapore Traffic Separation Scheme was significantly congested and dictated a higher state of readiness. Had this occurred, maximum plant reliability could have been set with a Master Helmsman and a qualified Engineering Lee
Helm on watch.

Brian Wang https://www.nextbigfuture.com/2017/11/navy-wide-incompetence-and-not-hacking-caused-the-recent-us-navy-collisions.html

US 11-16-17

LANL MegaPower Reactor

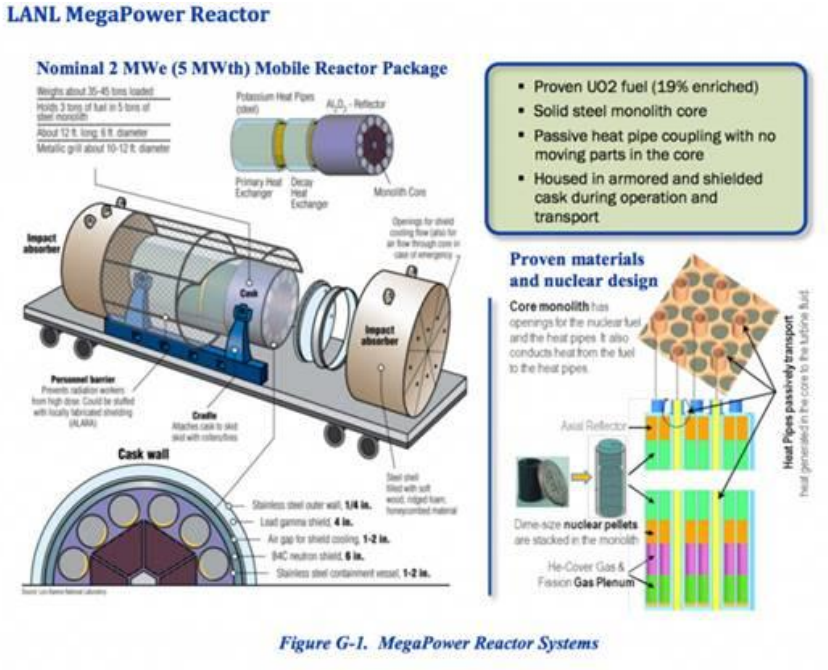
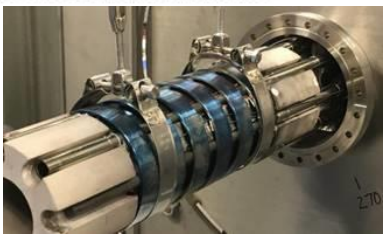


Figure G-1. MegaPower Reactor Systems

Los Alamos National Research lab is helping to design small compact fast reactors like KiloPower and Megapower. They are designed to maximize mechanisms so the reactors are totally self-regulating. The Los Alamos objective is to design-in self-regulation as the front-line feature in order to minimize technical and programmatic risk and to demonstrate via testing that self-regulation is both reliable and repeatable.

A scaled up 2 megawatt system would be expected to weigh about 35 metric tons. It would transportable by air and highway.

These are clever and novel designs based upon well-established physics that simultaneously simplifies the reactor controls necessary to operate the plant and have inherent safety features that guard against consequences of launch accidents and operational transients.



Brian Wang https://www.nextbigfuture.com/2017/11/small-and-passively-safe-nuclear-reactors-for-nasa-and-military-missions.html

US 11-18-17

Small and passively safe Nuclear reactors for NASA and military missions

brian wang November 18, 2017

This month NASA will start testing a tiny 1 kilowatt uranium fission reactor Stirling engines for use in possible future missions to Mars.

The low power means very little of the uranium is burned up. Therefore, the fuel does not swell and releases very little gas.

The kilopower reactor running for 15 years would have 0.12% swelling. This is less than 10% of swelling from the heat generated.

Brian Wang https://www.nextbigfuture.com/author/brian-wang

Want to Win? Homework First - Start at The Beginning

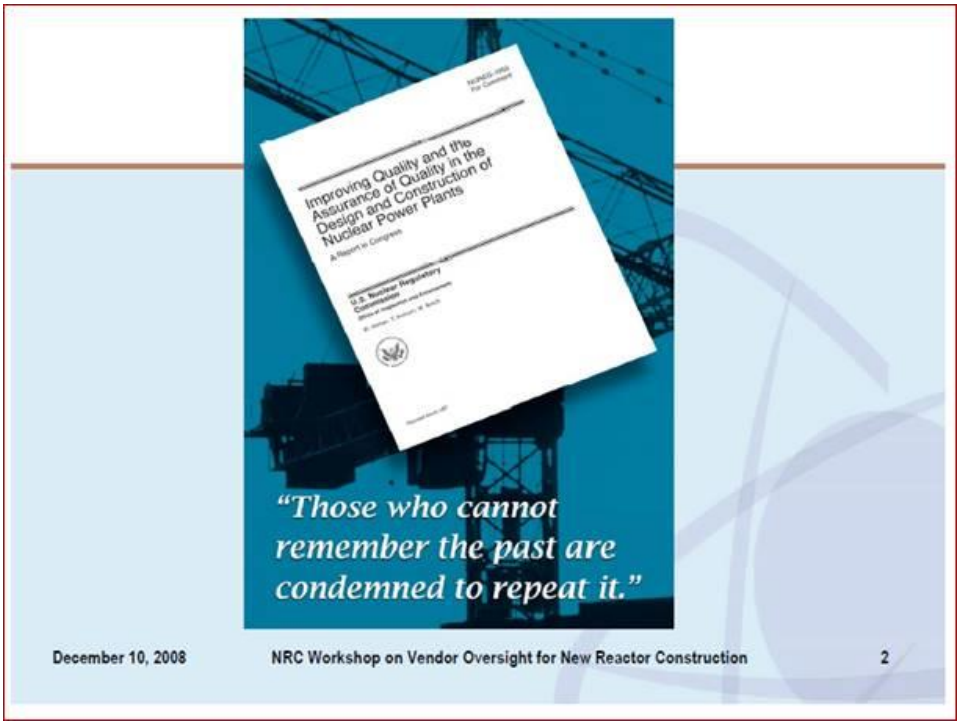
The U.S. Nuclear Power Renaissance 2008 NRC HQ Supplier – Insight | Oversight

The U.S. NRC Told the Supply Chain "Do Your Homework" in 2008

Did They Listen?

Did suppliers leverage from the nuclear power industry 1st generation ('60s '70s '80s)?

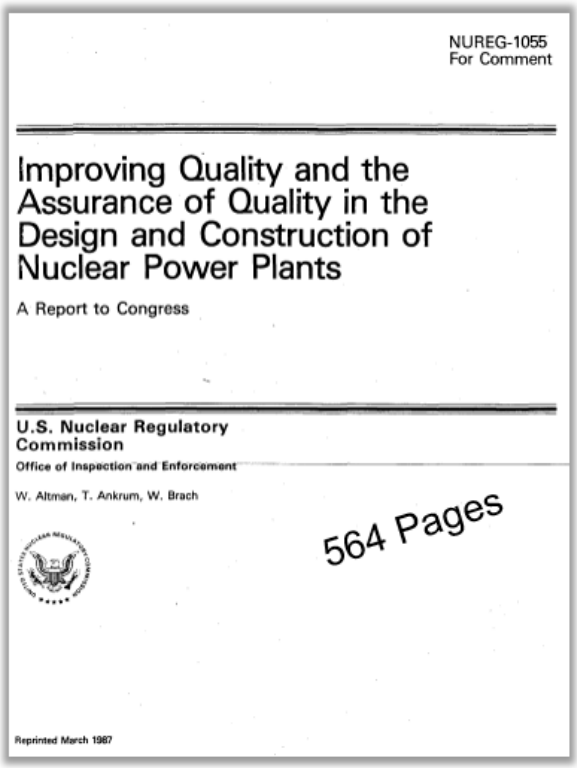
Second Slide – First Presentation. Did anyone special note this report?



NUREG-1055 - 1984, Report to Congress

Homework Wins	Understand the history for anything you do. Leverage Lessons Learned – L3.
NRC	https://www.nrc.gov/docs/ML0930/ML093070143.pdf
NRC Site	https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1055/
PDF-1055	https://www.nrc.gov/docs/ML0630/ML063000293.pdf

Leverage Lessons Learned
1984


NUREG-1055
For Comment

Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants

A Report to Congress

U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement

W. Altman, T. Ankrum, W. Brach

564 Pages

Reprinted March 1987

"Early training to Appendix B of 10CFR50 was through on the job training with experienced personnel. **In 1975, training in Appendix B consisted of self-reading.** In 1976, one hour of a fragmented course whose schedule was diverted by the class, was allocated to Appendix B. **A longer formalized course on Appendix B was not developed until 1983. During the study, it was stated there is a great need for more training in quality assurance, standards and Appendix B of 10CFR50.** It was also stated that there was practically no training in how to apply modules or how to do inspections. These skills come mainly from on-the-job-training. More training is needed to improve the caliber and qualifications of inspectors."

B.66

See www.GQMadvisors.com

Report to U.S. Congress 1984, NUREG-1055, Improving Quality & the Assurance of Quality in the Design & Construction of Nuclear Power Plants

1984 May | W. Altman, T. Ankrum, W. Brach, US NRC Div. QA, Safeguards, & Inspection Programs (Office of Inspection & Enforcement)

or go direct to the U.S. NRC.GOV .pdf

https://www.nrc.gov/docs/ML0630/ML063000293.pdf

What does it take to win?

If you don't understand what you are getting into before you start – you won't win.

Prevention First!

This document & NUREG-1055 points you in the right direction.

Winning Elements		
1	Organization	Team Work
2	Program	Strategy, Tactics, Qualify
3	Design	Design, Performance
4	Procurement	Qualified, Certified Supply Sources
5	Procedures	Rules, Regulations, Team Methods
6	Documents	Information, Communications
7	Purchased Material, Equipment, Services	Inspect, Test, Verify, Ensure
8	ID Materials, Parts, Components	Trace, Color-code, Label
9	Special Processes	Monitor, Measure Performance
10	Inspection	Inspect Everything All the Time
11	Test	Test Criteria Use & Verification
12	Measuring Test Equipment	Tool, Gage Accuracy & Maintenance
13	Handling & Storage	Everything for Preservation
14	Inspection, Test, Operating Status	ID & Control Performance Results
15	Nonconforming Items	ID & Control Errors
16	Corrective Action	Repair, Rework, Upgrade
17	Records	All Performance Data
18	Audits	Team Inputs, Meetings, Reviews, Strategy

Nuclear Energy Needs the Intrigued | Inspired Next Generations

& Embrace 18 Element Management System – it's the law 10CFR50 Appendix B

Auto Racing Needs the Intrigued | Inspired Next Generations

& Embrace 18 Element Management System

Team Work – Strategy – Design – Qualify – Regulations – Information – Ensure – Trace – Monitor
Inspection – Test – Tools – Handle – Status – Errors – Corrections – Data – Assess

Global Quality Management Advisors

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Is Your Team Focused on its Goals & Objectives for Performance Excellence?

If not, evaluate your management system.

https://gqmadvisors.com/wp-content/uploads/2016/08/GQM_updatedAudio.mp4?_=1

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Management Systems Focused on Quality Since 1991