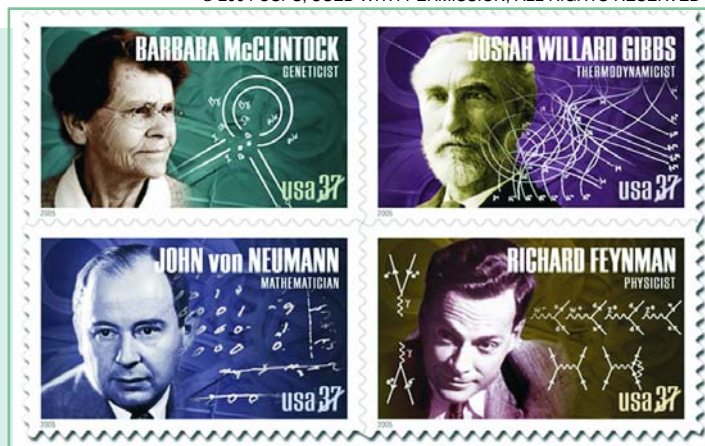


US Postage Stamps Feature Scientists

The US Postal Service is honoring four American scientists with stamps, to be issued on 4 May. Physicists Richard Feynman and Josiah Willard Gibbs, mathematician John von Neumann (who made significant contributions to quantum mechanics), and geneticist Barbara McClintock share the panel of first-class stamps.

Each stamp depicts a scientist with graphics relevant to his or her work, which is described on the stamp's sticky side. The stamps also bear hidden symbols to protect against counterfeiting; look for a physical constant in miniature on the Feynman stamp, for example. The panel is the first in what may become a philatelic series of scientists.

Ralph Leighton, who played drums with Feynman and helped write several of his popular books, had lobbied for a Feynman stamp for a decade. To celebrate, Leighton—the son of Robert B. Leighton, a coauthor of the ubiquitous *Feynman Lectures on Physics*—has organized a party at the post office in Far Rockaway, the New York City neighborhood where Feynman grew up. A few blocks away, the street where Feynman lived will be renamed in his honor. Both events will take place on 11 May, Feynman's birthday. All are invited (see <http://www.nyas.org/snc/calendar.asp>).



Toni Feder

the first few reactors of each new supported design to provide efficient financial options.” This basket would include secured loan guarantees, tax credits, accelerated depreciation, and other economic incentives from which a nuclear power plant builder could pick and choose. The incentives package could not exceed \$250 million in government money for each nuclear reactor.

In the leadership issues section of the report, the task force warns nuclear-industry leaders that they must “recognize that the federal government should not and cannot eliminate all the risks and vagaries of the energy markets for them.” The nuclear industry, the report says, “must clarify its needs and prioritize its requests” and “must also convey information to federal policymakers in clear, sharply defined terms with specific recommendations.”

Industry reaction

Richard Myers, senior director of business and environmental policy at the Nuclear Energy Institute, said the task force report was a “well thought out piece of work.” The nuclear industry, which NEI represents, is looking at \$400 to \$500 million as the FOAKE cost of a new nuclear plant, he said, so the report's fifty-fifty cost-sharing proposal with a \$200 million limit was reasonable. “We think the report, on balance, is pretty sensible. . . . Once the first ones are done, we think Wall Street and the companies will recognize the licensing process is manageable, costs are predictable . . . and we can move forward from that point on and finance them conventionally.”

Policymakers in both the administration and Congress must develop “a clear commitment to a national energy policy” that gives nuclear power

a strong role, the report says. “We urge that the president identify this as a critical priority for the nation and that Congress take the necessary steps to meet this priority.” The report doesn't mention the controversy surrounding the Yucca Mountain radioactive waste storage project in Nevada (see the story on page 32), but it does say the waste storage problem must be resolved. But the authors make clear that “the absence of a licensed repository is not a valid reason for postponing additional nuclear construction.”

Another critical aspect of encouraging a new generation of power plants is the concern over nuclear proliferation, especially in the wake of September 11th. The task force's bottom-line conclusion is that the rest of the world is going to move forward with energy generation from nuclear power regardless of what the US does, and the US would be better off participating than sitting on the sidelines.

An increase in the use of nuclear power in the US would actually “serve our non-proliferation objectives,” the report says, because “one of the most efficient and certainly the most thorough ways of disposing of that nuclear material is to burn it as fuel in com-

mercial nuclear reactors.”

Robinson said task force members “had several discussions with the folks over at the White House to understand what the traffic would bear” in terms of government support for the nuclear industry. “We've been getting the right words to do at least one such [reactor construction and startup].” That would shore up the confidence that all of the work that was done to speed up the regulatory process has worked, he said. “The object is . . . to show that nuclear power is a good investment.”

And it is economics, not safety, that killed nuclear power development in the US, Robinson said. “Nuclear power was grossly overbuilt because of predictions that energy growth was going to double every seven or eight years,” he said. When that didn't happen, it became uneconomical, especially with the uncertain licensing procedures, to invest in nuclear power, he said.

“So it's going to take a big infusion of courage for the next person in the finance community to take the first step,” he said. That courage will be easier to find if it is bolstered by a federal cost-sharing program, the report concludes.

Jim Dawson

Iran Hints of Nuclear Flexibility

In a March statement marking 35 years since the signing of the nuclear Nonproliferation Treaty, President Bush called on signatories to adhere to the treaty. “We cannot allow rogue states that violate their commitments and defy the international community to undermine the NPT's fundamental role in strengthening international security,” he said. “We must therefore close loopholes that allow states to pro-

duce nuclear materials that can be used to build bombs under the cover of civilian nuclear programs.” The statement was aimed at Iran, which had failed to inform the International Atomic Energy Agency (IAEA) of the depth of its nuclear activities.

Despite the president's words, the administration appears to have little faith in using the NPT as a mechanism for restricting Iran. Typically the US

would lobby other nations to strengthen the NPT and act against potential treaty violators before the NPT's five-year review, which will be held throughout this month in New York. However, for the first time in more than 15 years, the conference will open without a prearranged agenda. And according to sources at the State Department, little has been done to promote US interests at the meeting. Without a strong US presence, the likelihood of an impasse at the conference is high, says Joseph Cirincione of the Carnegie Endowment for International Peace. If the treaty fails, he adds, it "could lead to a cascade of countries deciding to develop nuclear weapons." Says Mohamed ElBaradei, IAEA director general, "It is clear that recent events have placed the NPT . . . under unprecedented stress."

Five main topics are expected to dominate the review: intrusive IAEA inspections, UN Security Council penalties for countries that breach the NPT, tighter controls on stockpiles of plutonium and highly enriched uranium, the failure of the nuclear weapons states to eliminate their nuclear weapons stockpiles, and Iran's nuclear program.

Only after Iran agreed to tougher

IAEA inspections did the scale of the country's activities become apparent. The US hopes that France, Germany, and the UK can, through the threat of sanctions and the promise of trade agreements, persuade Iran to give up its uranium conversion facility (UCF) at the Esfahan Nuclear Technology Center and the Natanz enrichment facility. That is a false hope, says Cirincione, who recently attended a workshop on nuclear technology in Tehran organized by the Iranian government. "The Iranians consider the economic agreement an insult. . . . They need something more than that, such as access to Generation IV reactor technology . . . and they don't want to give up their enrichment facilities."

At the workshop, Hassan Rohani, secretary of the Supreme National Security Council of Iran, said he would consider selling stakes in the Natanz and Esfahan facilities, according to Jeffrey Boutwell, executive director of Pugwash Conferences on Science and World Affairs. The increased scrutiny would make it harder for Iran to divert material for military uses. "What Iran needs to do is build trust and transparency, to show that their nuclear program is a peaceful one, and Rohani expressed a willingness to look at

several possibilities," Boutwell says.

Currently Iran has voluntarily suspended work at the UCF and Natanz, although under article IV of the NPT any member state has the "inalienable right" to develop nuclear fuel. And the nuclear weapons states are obligated to assist them, says arms control expert Wolfgang K. H. Panofsky of Stanford University. "The Iranians are objecting to being singled out as having an intent to develop nuclear weapons," he says. "They voice no objections to strengthening the NPT, as long as the changes apply to everybody."

Says Boutwell, "Rohani did make it clear that Iran's current suspension of uranium enrichment activities is just that—temporary—and that Iran intends to follow through with a full civilian nuclear power program, as allowed by article IV." In fact, Iran has publicly stated that if the US succeeds in persuading the IAEA to refer Iran for discussion by the UN Security Council, the only body that can implement global sanctions, then Iran will immediately reactivate its production facilities. Within two to five years Iran could have enough material for a nuclear power plant—or a bomb.

Paul Guinnessy



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