

**Q: A statement from TERI lists the number of companies you are associated with, the money which has flowed back to you and the organization: €100,000 from Deutsche Bank, \$80,000 from Toyota, and so forth. You don't think this is conflict of interest?**

**R.K.P.:** Where is the conflict of interest? I am a paid employee of my institute, not of the IPCC. I don't see why I shouldn't advise anybody anywhere in the world... as long as I am not making money out of it. [The money] is going to my institute.

**Q: Some people disagree; they believe that**

**you have to be cleaner than Caesar's wife.**

**R.K.P.:** Yeah, but Caesar was also murdered by Brutus, wasn't he? Caesar was murdered by a group of people for their own interest, all right? So I cannot possibly be held accountable for all the lies that the media are writing about in a certain section of the U.K. press. I mean, if they are going to influence public opinion, I can assure you it is not going to last forever. I am absolutely convinced the truth will prevail in the end.

**Q: You put up a brave face, but some in the scientific community feel let down. They say**

**that you are carrying too much baggage, that it's time for you to move on.**

**R.K.P.:** I certainly have no intention to quit. I will continue as the chairman of the IPCC till I have completed the fifth assessment report.

**Q: Are you becoming a thorn in the side of vested interests—a thorn they wish to eliminate?**

**R.K.P.:** No question about that. But I have no intentions of backing off. I am not going to tailor the truth to suit the vested interests of those who would like to continue with business as usual.

## PHYSICS

# NRC Urges U.S. to Rethink Sale of Helium Reserve

In 1996, the U.S. Congress decided to sell the 1 billion cubic meters of gaseous helium—specifically the heavier isotope, helium-4—that the country had stockpiled. But conditions it imposed on the sales are keeping the price of helium artificially low and encouraging waste of a substance indispensable for numerous scientific and technological applications, says a National Research Council report released last week.

“Helium is being sold at fire-sale prices, and low prices are not going to encourage the recycling, conservation, and substitution that might prolong the existing supply,” says Charles Groat, a geologist at the University of Texas, Austin, and co-chair of the committee that wrote the report.

Produced in radioactive decay, helium collects in the same rock formations that trap other gases and is primarily a byproduct of the natural gas industry. It is the only element that remains a liquid at absolute zero, making it an unparalleled cooling agent, or “cryogen.” Without helium, the superconducting magnets in MRI machines won't work and myriad lines of physics research would grind to a halt. Helium is also essential to purge the tanks and lines in rockets that burn liquid hydrogen.

In 1960, Congress told the now-defunct Bureau of Mines to stockpile helium piped from gas fields in Kansas, Oklahoma, and Texas in a rock formation called the Bush Dome Reservoir near Amarillo, Texas. By 1973, the dome held 1 billion cubic meters of gas. But the bureau's helium sales were weaker than expected, and the reserve was losing money. So 13 years ago, Congress told the Bureau of Land Management (BLM), which had taken control of the helium, to sell almost all of it by 2015.

Congress required BLM to sell the gas for

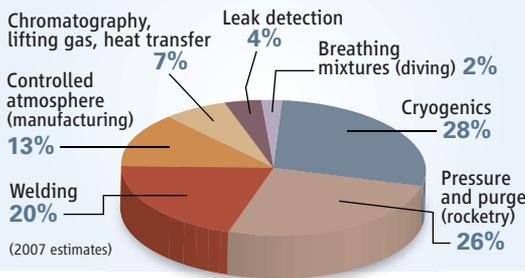
enough money to pay off the reserve's debt—\$1.66 per cubic meter with increases for inflation. At the time, BLM's price for crude helium was above the market price for refined helium. Since 1995, however, global demand for helium has increased by nearly 70%, and BLM's current price of \$2.29 per cubic meter is below the price from private sources.

The 60 million cubic meters pumped from the reserve each year make up half the crude helium brought to market in the United States

for big consumers such as NASA and the Department of Defense that would ensure a supply in times of shortage, the report says.

The report even suggests that Congress rethink the sale of the reserve, as the world's resources could be depleted within 40 years and demand could exceed supply within a decade. “Probably 10 or 15 years ago it was heresy to say we need a reserve,” Groat says. “Now that the situation has changed, I think that may be revisited.” At the least, he says, Con-

### HOW THE U.S. USES HELIUM



**Wise use?** Helium is indispensable for chilling the superconducting magnets in the Large Hadron Collider (*right*) and manufacturing optical fibers, but not for welding and filling balloons.

and a third of the total worldwide. So, the report says, the low price, which BLM sticks to as a matter of policy, drives the market and spurs needless consumption, such as the 15 million cubic meters used annually by welders in the United States. (Europeans use argon.)

BLM should establish a higher market-based price, the report says, although that may be tricky, as only four refiners have access to the pipeline to the dome. To soften the blow to scientists, those with grants from agencies such as the National Science Foundation, the National Institutes of Health, and the Department of Energy should be allowed to buy BLM helium under terms currently reserved

gress will have to tell BLM what to do after 2015, as the bureau will miss the deadline for selling the remaining 650 million cubic meters of gas by years.

Will Congress heed the report? Maybe, says one congressional staffer. An acute shortage of the lighter isotope of helium, helium-3, has already grabbed legislators' attention, he says, because it may derail the Department of Homeland Security's plan to deploy thousands of helium-3-filled radiation detectors (*Science*, 6 November 2009, p. 778). “At least you can say to members, ‘You were working on this, and here's this other part of the problem you should be aware of.’” —ADRIAN CHO

