

DOM-05 ELIMINATE THE DEPARTMENT OF ENERGY'S PRECOLLEGE EDUCATION PROGRAM

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	35	35	35	35	35	175
Outlays	23	33	35	35	35	161
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	36	37	38	39	41	191
Outlays	23	35	38	39	40	175

As part of its effort to increase the achievement of U.S. students in mathematics and science, the Department of Energy (DOE) spends \$35 million on precollege mathematics and science education activities. Those activities have been criticized as ill-focused and unsupervised. They may also duplicate efforts in the same area by the Department of Education and the National Science Foundation (NSF). Eliminating the DOE program would save \$23 million in 1996 and \$161 million over the 1996-2000 time frame relative to the 1995 funding level. Relative to the 1995 funding level adjusted for inflation, the option would save \$23 million in 1996 and \$175 million over the 1996-2000 period.

In recent years, concern about the mathematics and science skills of U.S. precollege students has resulted in additional funds being devoted to those areas. The Department of Education and the NSF have received the bulk of both the resources and the responsibility for improving mathematics and science achievement. However, DOE's activities in precollege education have also grown during recent years, increasing from \$2 million in 1990 to \$35 million in 1995. DOE's program also includes some support to universities for research into science education.

The DOE program, undertaken under the Department of Energy Science Education Enhancement Act of 1990, focuses on three general areas: teacher enhancement, student support, and systemic reform.

Activities related to teacher enhancement account for more than two-thirds of the program's budget; by contrast, systemic reform accounts for roughly one-tenth. Teacher enhancement projects are generally one-time events, typically without a follow-up program. (For instance, teachers might be brought in to conduct research at DOE for four to eight weeks during the summer.)

The evidence is weak that one-time experiences of that kind advance student achievement to a significant degree. The projects are subject to self-selection bias and attract the most scientifically adept teachers. Such teachers are already likely to know more than enough science to teach at the precollege level, so additional knowledge on their part may not contribute proportionately to students' achievement. Factors other than pure scientific knowledge--for example, enthusiasm, confidence, and classroom organizational skills--may be more important to success in teaching.

The issue of evaluation has also been raised in criticisms of the DOE program. The General Accounting Office (GAO) found that budget decisions in the precollege education program were not linked to project evaluations. Whether successful or not, projects received increased amounts of funding--in some cases, dramatically higher levels. In addition, GAO reports that the evaluations that were conducted contained technical flaws in their statistical method

ology. In response to GAO's evaluation, DOE has announced plans to improve the program's management and evaluation functions.

Similar programs sponsored by the NSF have been growing substantially and receive better evaluations than the DOE programs. A recent Stanford Research Institute assessment of the NSF programs indicates that, unlike the DOE efforts, they are integrated into larger state-level activities to improve student achievement in mathematics and science. Thus, rather than limited one-time summer efforts, the NSF is concentrating on creating assets--such as model schools and new curricula--that are not isolated from educational institutions and infrastructure at the state level.

Advocates of continuing the DOE precollege education program argue that the ability of the United

States to remain an economic world leader depends crucially on whether the next generation of U.S. citizens can excel in technology development. In the past, students have excelled in part because the mission to the moon and other large federal science programs showed a previous generation of students how exciting scientific progress could be. DOE's research facilities give teachers a unique opportunity to encounter leading-edge science as it is actually practiced and to bring that experience back to their students. Furthermore, supporters argue that current methods of assessing students inadequately measure the higher-order, problem-solving skills that could be affected by teacher training and knowledge. If that argument is valid, the weak empirical links between teacher enhancement and student performance may say more about the strength of measurement tools than about the weakness of the program.

DOM-06 ELIMINATE ENERGY CONSERVATION GRANT PROGRAMS

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	262	265	270	272	272	1,341
Outlays	68	213	256	272	272	1,081
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	271	285	300	312	323	1,491
Outlays	70	224	276	302	313	1,185

This proposal would halt new appropriations for three block grant programs that support energy conservation activities by the states. In 1995, the biggest of those appropriations is for weatherization assistance (\$227 million), followed by institutional conservation (\$29 million) and state energy conservation (\$23 million). This option would halt new appropriations for those grant programs, saving \$68 million in 1996 outlays and \$1.1 billion in outlays from 1996 through 2000 measured against the 1995 funding level. The option would save \$70 million in 1996 outlays and \$1.2 billion in outlays from 1996 through 2000 measured against the 1995 level adjusted for inflation.

The Weatherization Assistance Program helps low-income households reduce their energy bills by funding such activities as installing weather stripping, storm windows, and insulation. The states have reported to the Department of Energy (DOE) that about 4 million homes have been weatherized since 1977, when the program began. The Institutional Grant Program helps reduce the use of energy in educational and health care facilities by adding federal funds to private and local public spending to encourage local investment in building improvements. And the State Energy Conservation Program funds projects that, for example, establish energy-efficiency standards for buildings and promote public transportation and carpooling. These three DOE programs are independent of a similar block grant activity, the Low Income Home Energy Assistance Program, ad-

ministered by the Department of Housing and Urban Development.

Federal grants to promote less consumption of energy are in many respects an artifact of the mid-1970s and the widespread concerns about energy security--for all sources, including oil, natural gas, and coal--prevalent at that time. Today, those concerns are more correctly focused on imported oil supplies. Little benefit to the cause of oil-supply security can come from state grant programs that help reduce residential and institutional demand for natural gas and coal-generated electricity. And although the government has attached some urgency to the need to reduce energy use for environmental reasons, federal support for reducing the use of gas and coal through conservation grants for security or environmental needs is clearly at odds with other federal policies that simultaneously promote the production and use of those fuels.

In any case, the large savings of energy that states claim for these conservation programs may be overstated. Those claims have never been subjected to critical analysis by DOE or by any of the Congressional support agencies. According to DOE, total annual savings are on the order of 4.7 quadrillion Btus (British thermal units), a questionable result given that the figure represents over 15 percent of current energy use in the residential and commercial sectors. In contrast, the 4 million homes that DOE reports have benefited from energy conservation

grants constitute less than 5 percent of the total households in the United States.

Discontinuing the grant programs could impose hardships on states that wish to continue their energy conservation efforts but are experiencing financial distress. Many states still rely heavily on such grants to assist low-income households and public institutions. According to DOE, over 20 percent of all eligible buildings have had some energy improvements as a result of the Institutional Grant Program. The Weatherization Assistance Program currently helps weatherize about 100,000 homes per year, and more than 27 million homes remain eligible for assistance.

Such figures may compel continued federal support in the energy conservation area. In 1994, however, the Congress allowed the legislative authorization for all three programs to lapse.

This proposal would not affect spending for the three DOE grant programs that are funded by offsetting collections (money that the Department of Energy receives in court settlements resulting from current prosecutions of violations of federal laws regulating petroleum prices in the 1970s). Those collections totaled \$21 million in 1995, with additional amounts estimated to total between \$40 million and \$50 million over the 1996-2000 period.

DOM-07 SELL THE STRATEGIC PETROLEUM RESERVE

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	194	244	244	244	244	1,170
Outlays	109	204	241	246	246	1,046
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	202	260	270	279	289	1,300
Outlays	113	216	262	276	286	1,153

The Strategic Petroleum Reserve (SPR) was first authorized by the Energy Policy and Conservation Act of 1975 (EPCA) to help safeguard the nation against the threat of severe disruptions of oil supplies. The SPR is a government-owned stock of crude oil, available for release at the discretion of the President in the event of a severe disruption of oil supplies or under the obligations of international agreements. The Department of Energy (DOE) has released oil from the SPR in emergency circumstances only once, during the Persian Gulf crisis. It has, in addition, released oil in test sales on two occasions.

The reserve currently holds 592 million barrels of crude oil stored in five underground sites. As amended in 1990, EPCA authorizes DOE to store up to 1 billion barrels of crude oil for emergency use. To date, DOE has constructed storage capacity for up to 750 million barrels. The department has plans to develop a capability for releasing, or "drawing down," oil from the reserve at a rate of 4.5 million barrels per day (bbl/day). Problems at several of the storage sites have brought the current drawdown capability to about 3 million bbl/day--nearly 50 percent of the nation's daily level of crude oil imports in 1994.

This option would terminate the SPR program and sell off all of the crude oil currently in the reserve along with all related storage and transportation facilities. Such a sale could generate budgetary sav-

ings from avoided appropriations for operations and maintenance. Outlay savings would total \$1.0 billion over the 1996-2000 period measured against the 1995 funding level and \$1.2 billion over that period measured from the 1995 level adjusted for inflation. Additional proceeds from the sale of crude oil and facilities could bring the total savings to more than \$13 billion if the oil sales took place over a five-year period. Under current law, however, the proceeds from those assets would not count as budgetary savings.

As an alternative to terminating the entire SPR program, the government could save money by freezing the reserve at its current level. That option would result in minimal budgetary savings, however, because recent budget actions have essentially established a freeze at the current level. DOE still has more than \$200 million of oil acquisition funds that would permit it to purchase another 15 million barrels of crude oil, which would bring the reserve up to 607 million barrels. In estimating savings, however, CBO assumed that much of those funds would not be spent for new oil.

The fundamental rationale for developing the Strategic Petroleum Reserve was an economic one. Specifically, an emergency release of strategic stocks of oil can help the nation sustain its economic output and consumption by lowering oil prices and enabling the economy to reduce its total oil imports. Depending on the circumstances of the crisis, a release may

also be of economic value because it can help the economy avoid the costs of adjusting to temporarily higher prices for oil.

Two general areas of concern underlie a proposal to terminate or scale back the SPR program. First, institutional changes in the oil market and the economy have reduced the potential costs of disruptions of oil supplies in ways that have lessened the potential benefits of releasing SPR oil in a crisis. Second, recent problems affecting the readiness of the SPR indicate that the future costs of maintaining the reserve will be greater than previously assumed.

The potential benefits from releasing SPR oil are smaller today than they were in the past because the economy is better able to accommodate a disruption of oil supplies without major adverse effects. In particular, a number of institutional changes in oil markets and the economy now allow the United States to significantly lower its requirements for imported oil on short notice. As a result, the nation's payments for imports do not rise commensurately with oil prices. For example, because petroleum prices today are not regulated, the domestic oil market receives the proper price signals to reduce the use of oil and increase domestic production in response to an oil price shock. And institutions such as futures markets have reduced the pressure on businesses to accumulate private stocks of oil during a crisis, which further curtails oil imports. Moreover, the role of oil in the nation's economic activities is smaller today than it was in the past: businesses and individuals make greater use of other fuels and use all fuels more efficiently than in the 1970s, when the SPR was conceived. As a result, any rise in oil prices today has a smaller effect on inflation and, in turn, less impact on real income and consumer expenditures.

Aside from declining benefits, the growing costs of maintaining the SPR also strengthen the case for eliminating it. After nearly 20 years, many of the SPR's facilities are showing signs of age in ways that both reduce the SPR's drawdown capabilities and point to the need for mounting expenditures on maintenance in the future. Today, the SPR can effectively distribute about 3 million bbl/day for 90 days--far below the design capacity of the reserve. The smaller drawdown capability stems from problems with natural gas seepage into some of the storage caverns and excessive heat. The seepage produces an excessive gas content in the oil and makes it too volatile for transportation. Excessive heat in the storage caverns creates higher vapor pressure for the crude oil and increased air emissions during drawdown. Those problems mean that about 200 million barrels of SPR oil cannot be safely removed. A third problem that is reducing the availability of SPR oil even further is water leakage in caverns that hold a total of 73 million barrels of oil.

Arguments against eliminating the reserve are rooted in an alternative view of its benefits and costs. Proponents of keeping the SPR contend that the economic costs of maintaining the reserve may still be significantly less than the potential benefits to be gained from releasing that oil during a future disruption of oil supplies. A further argument calls for retaining the SPR as a national security asset. For example, the federal government is a major consumer of oil, and the SPR could be a supply for its use. Moreover, to the extent that the United States is in a position to affect the world supply of and demand for oil through its military and geopolitical activities, it will have greater freedom to pursue those activities if it can use the SPR to ameliorate their effects on world oil prices.

DOM-08 ALLOW PRIVATE PRODUCERS TO BUILD AND OPERATE
COGENERATION FACILITIES AT FEDERAL CIVILIAN INSTALLATIONS

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	0	0	30	30	30	90
Outlays	0	0	10	25	30	65
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	0	0	30	30	30	90
Outlays	0	0	10	25	30	65

Over the years, the Department of Defense has entered into agreements with private power producers to build and operate cogeneration facilities at some of its installations. Those facilities provide electricity and heat to the installations and then sell off any excess electricity they produce to private users. Cogeneration conserves energy because power plants produce heat and electricity at the same time and from the same energy source. But title VIII of the Shared Energy Savings Amendment of the National Energy Conservation Policy Act of 1978 restricts power plants at nondefense federal installations from making similar arrangements.

Allowing private utilities to cogenerate electricity and heat at the government's civilian facilities could save about \$65 million in outlays over the next five years by reducing appropriations of budget authority by roughly \$90 million in the same period. Such potential reductions in budget authority from the 1995 funding level are preliminary estimates that make no significant distinction between inflated and uninflated savings. (Thus, the table shows identical preliminary estimates of savings from both the 1995 funding level and the 1995 level adjusted for inflation.) Civilian federal agencies--primarily the Department of Energy but also the National Aeronautics and Space Administration, the General Services Administration, and the Department of Veterans Affairs--could avoid the cost of rebuilding aging plants that provide steam to heat buildings and power indus-

trial processes. This option assumes that private investors would pay all construction costs for replacing obsolete federal power plants and assume all of the financial risk related to the investment. Actual savings would depend on which projects were selected for replacement and when. Additional savings--not included in the table--could result from lower utility costs for government agencies if the private providers operating the cogeneration facilities sold steam and electricity at lower rates than the agencies now pay. The Administration included this proposal in its National Performance Review.

Proponents of the proposal note that it would reduce federal outlays while increasing electricity generating capacity and conserving energy. The new cogeneration facilities would be more efficient than current facilities, requiring less energy to produce electricity. But achieving that efficiency requires that private producers be allowed--as they would be under this option--to sell off-site any excess electricity they generated. Even federal facilities with steam plants that do not need rebuilding could lower their heating and electricity costs by allowing private developers to build and operate cogeneration facilities.

A disadvantage of this proposal is that some utilities that now provide electricity to federal civilian agencies might well object to losing a portion of their business; in addition, under the Public Utility Regulatory Policies Act, they would be required to buy

excess power from the new cogeneration facilities. The total amount of power involved, however, is not large, and the effect of this option on utilities would vary greatly--depending on cost factors and the price-setting rules used by public utility commissions.

Some utilities might welcome the new source of power, but others with sufficient generating capacity for their needs might resent having to make required purchases of electricity from the cogeneration facility.

**DOM-09 ELIMINATE ELECTRIFICATION AND TELEPHONE CREDIT
SUBSIDIES PROVIDED BY THE RURAL UTILITIES SERVICE**

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	62	62	62	62	62	310
Outlays	6	15	35	49	59	164
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	64	66	68	71	73	342
Outlays	6	15	36	53	64	174

The Rural Utilities Service (RUS) is an agency within the Department of Agriculture that, among other activities, provides financial assistance in the form of subsidized loans and grants to electric and telephone companies serving primarily rural areas. This option addresses only the credit subsidies provided through loans for electrification and telephone service that were previously administered by the Rural Electrification Administration (REA). The former REA programs were combined with other loan and grant programs in 1994 to form the RUS. (Additional potential savings from cutting other RUS programs are described in DOM-31.)

For 1995, RUS subsidies to electric and telephone companies total about \$60 million. In addition, the agency spends nearly \$40 million per year administering those programs. Eliminating the credit subsidies for loans made or guaranteed by the RUS would reduce outlays by an estimated \$6 million in 1996 and \$164 million between 1996 and 2000 measured from the 1995 funding level. Total savings over that period from the 1995 funding level adjusted for inflation would be \$174 million.

Most of the borrowing that the REA subsidized was established in the 1930s, 1940s, or 1950s. Many communities served by those borrowers are now much larger than the original service-area requirement of no more than 1,500 inhabitants. In total, the agency's borrowers serve about 10 percent of the

nation's electricity consumers and about 4 percent of its telephone customers.

Credit subsidies for loans to rural electric and telephone companies were reduced by more than one-half from 1993 to 1994, reflecting the significant changes in the program enacted in the Rural Electrification Loan Restructuring Act of 1993. Moreover, because the cost of federal borrowing declined significantly in 1992 and 1993, the average subsidy provided for the RUS's low-interest (5 percent) loans also decreased. Before passage of the 1993 act, most RUS borrowers were eligible for 5 percent loans. Under the restructured program, some borrowers are still eligible for the 5 percent loans; others may borrow from the agency at slightly higher (although still subsidized) rates; and still others may borrow either at the rate that the Treasury pays to borrow or 7 percent, whichever is less. Although the appropriation for the cost of subsidies for all lending related to rural electrification and telephone service declined from about \$200 million in 1993 to about \$60 million in 1995, the agency may still make new loans totaling close to \$1 billion this year--slightly less than the level in 1994.

The savings shown in the table could result from either of two scenarios: discontinue lending and require RUS borrowers to use private sources of capital for all of their loan needs, or continue a federal loan program but eliminate subsidies. A loan program

with no subsidy costs would require raising the interest rates on loans to rural electric and telephone companies to the level of the Treasury's cost of borrowing; it would also mean charging small loan origination fees to cover the cost of defaults for certain classes of loans. In addition to savings in subsidy costs, some savings in administrative costs could be achieved if all such lending was discontinued. Some of the nearly \$40 million per year in current salaries and expenses would be required to administer existing loans, but those costs could be gradually reduced under the no-new-lending option. Potential administrative savings of more than \$30 million over the 1996-2000 period could be achieved by eliminating the program, but those additional savings are not counted in this option.

The loan program for rural electrification and telephone service has largely fulfilled its original goal of making those services available in rural communities. Yet many borrowers still depend on federal loans to maintain and expand those utilities. Increasing the interest rates or charging origination fees on some loans would raise the rates such borrowers charge their customers, especially in the rural regions that are most affected. Borrowers argue that they need some level of subsidization to keep their service and utility rates comparable with those in urban areas. Most RUS borrowers already use some private financing, however. Because the cost of interest accounts for only a small percentage of the typical customer's bill, eliminating the remaining federal subsidy would have little effect on the utility rates that most borrowers charge their customers.

DOM-10 ELIMINATE BELOW-COST TIMBER SALES FROM NATIONAL FORESTS

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	20	35	50	65	80	250
Outlays	15	30	45	60	75	225
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	20	35	50	65	80	250
Outlays	15	30	45	60	75	225

The Forest Service (FS) manages federal timber sales from 119 national forests in the national system. In 1994, the FS sold roughly 3.0 billion board feet of public timber under contract to private lumber companies. The total 1994 harvest, approximately 4.8 billion board feet providing about \$800 million in federal timber receipts, represented a continued decline in volume from previous years. In 1994, the FS spent over \$900 million on timber management, reforestation, construction of logging roads, payments to states, and other timber program costs. The net result for the program as a whole was a situation in which costs exceeded receipts.

In seven of the nine National Forest System regions, annual cash receipts from federal timber sales have consistently failed to cover the FS's annual cash expenditures. For example, in three of these so-called below-cost timber sale regions--the Rocky Mountain, Northern, and Intermountain--cash expenditures have exceeded cash receipts by a ratio of about 3 to 1, on average, over the past decade. (Annual timber program costs in the three regions still exceed annual timber receipts if FS expenditures for road construction are excluded.) The FS does not maintain the data needed to estimate annual timber receipts and expenditures associated with each separate timber sale; it is therefore hard to determine precisely the budgetary savings that could be achieved by phasing out all below-cost timber sales in the National Forest System. As an illustration of the potential savings, however, eliminating all future timber

sales from the three regions mentioned above would reduce FS outlays over the 1996-2000 period by \$290 million, including savings in the timber road budget. Timber receipts would be reduced by about \$65 million. Net savings in federal budget outlays over the 1996-2000 period would be about \$225 million. Because the estimated savings are based on an actual program estimate of the cost of building roads in the three regions, the savings would be the same whether measured against the 1995 funding level or that level adjusted for inflation.

Below-cost timber sales have several potential disadvantages. They may lead to an increase in the federal deficit, wasteful depletion of federal timber resources through uneconomic harvests, unwarranted destruction of roadless forests valued by many recreational visitors, and government interference with private timber markets.

One advantage of the sales, however, is that the FS timber program generates benefits to the government other than financial ones. Among these are community stability in areas dependent on the federal timber industry for logging and other related jobs and increased access from road construction for fire protection and recreation. Community stability could be particularly important in light of current court injunctions--to protect the spotted owl--that have reduced harvesting activities in some areas. The risk of economic hardship from eliminating the federal timber program in those areas could be reduced by gradually

lowering the level of below-cost timber sales, by providing federal job-replacement-skills programs, and by encouraging greater development of other activi-

ties--such as tourism and recreation--in the national forests.

DOM-11 REDUCE BUREAU OF MINES FUNDING FOR MINING
AND RELATED TECHNOLOGY DEVELOPMENT EFFORTS

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	18	36	54	73	91	272
Outlays	12	29	47	65	84	237
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	22	45	67	90	113	337
Outlays	14	36	58	81	104	293

The U.S. Bureau of Mines (USBM) disseminates information and conducts research and development related to mining activity and the use of minerals. This option would reduce USBM funding for near-term development of specific products and technologies while preserving the agency's programs for information dissemination and basic research. To accomplish those goals, funding for areas of the agency's program other than information would be reduced to 25 percent of its 1995 level, with those reductions phased in over the 1996-2000 period. In total, over the five-year period, that change would save \$237 million in outlays measured from the 1995 funding level and \$293 million measured from the 1995 level adjusted for inflation.

USBM currently groups its research and development work in several categories: environmental remediation, pollution prevention and control, health and safety, and materials research partnerships. Included in those groupings, however, are efforts that the agency previously identified as mining technology and minerals and materials science. Much of that funding, regardless of classification, is for research and development specific to identifiable mineral commodities, new materials, and mining technologies. The products of those efforts are frequently of direct interest and value to the mining industry (including mine workers) and to government agencies such as the Department of Energy, the Department of Defense, the Environmental Protection

Agency, and the Department of Labor. In fact, a part of USBM's work receives financial support from all of those groups.

Proponents of the option to reduce USBM funding do not question the merits of such development work--especially in instances in which its benefits are evidenced by the availability of outside support. Two general concerns exist. First, proponents doubt the necessity for a government role, especially a role that so strongly supports one particular industry. (See DOM-03 for a related discussion of the merits of government development of energy technologies.) A general case may be made for the government's involvement in markets whenever structural factors impede the efficient production and pricing of an activity. The high cost of information may be one such impediment and could serve as a rationale for government efforts to collect and disseminate data on mineral availability and market activity. Similarly, the high costs and uncertain paybacks associated with basic scientific research could be used to justify government support of such research.

However, for products or technologies with identifiable commercial value, the case for government support is less compelling. Industry's willingness to fund specific research and development activities, for example, suggests that in those areas, the USBM is subsidizing something that the private sector would do on its own.

The second concern relates to the efficiency of the government's efforts. Government agencies have historically demonstrated only limited success in identifying commercially viable innovations and bringing them to market. Although the USBM can point to a long list of patents that it has received and licenses for commercial production that it has issued, such successes are rarely the whole picture. Some of the development work has been in areas with no commercial interest; in other areas, existing products or technologies compete with the government's output, indicating that the incremental contribution of the government's work is small and that the government may be crowding out private research. In general, evaluating claims of the government's success in its research endeavors is difficult without comparing the total government funds expended with measures of commercial success (such as licensing revenues)--calculations that scientific agencies rarely make.

Supporters of the USBM argue that much of the agency's research and development directly supports national policies related to protecting the environment, promoting health and safety, and bolstering a

vital industry. For example, as a consequence of their research work, USBM staff are uniquely qualified to contribute to the development of technologies to locate and clean up abandoned mining sites. In addition, supporters argue that some of the work that the USBM does would not otherwise be done and that in cases in which USBM activities overlap those of other government agencies, the USBM has a better record of productivity and cost efficiency.

This option includes discontinuing federal production of helium, which is an activity of the USBM. That program was intended to help ensure adequate supplies for federal scientific and defense activities. Federal production, however, now accounts for only 10 percent of total U.S. production. Ending it would result in a small increase in net receipts that would appear as an annual decrease of \$8 million in on-budget outlays, after the incurring of some initial costs. Federal production facilities--worth about \$10 million--could be sold, but those receipts are not included in the savings estimated for this option. The option assumes that the Department of the Interior would maintain the federal helium reserve.

DOM-12 ELIMINATE FEDERAL GRANTS FOR WATER INFRASTRUCTURE PROGRAMS

	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
From the 1995 Funding Level						
Budget Authority	2,962	2,962	2,962	2,962	2,962	14,810
Outlays	181	850	1,768	2,458	2,808	8,065
From the 1995 Funding Level Adjusted for Inflation						
Budget Authority	3,060	3,163	3,276	3,389	3,507	16,395
Outlays	187	885	1,863	2,641	3,093	8,669

The Clean Water Act (CWA) and the Safe Drinking Water Act prescribe performance requirements for municipal wastewater and drinking water systems to protect the quality of the nation's water and the safety of its supplies of drinking water. The Clean Water Act also provides financial assistance so that communities can construct wastewater treatment plants that comply with the provisions in the act. (The CWA requires secondary treatment of wastewater to remove at least 85 percent of raw pollutants.) The Congress has appropriated about \$3 billion for water infrastructure programs for 1995 including funds for wastewater programs and a new program for drinking water facilities.

Construction grants for wastewater treatment plants were first authorized in 1972 under the Title II categorical grant program of the CWA. The Environmental Protection Agency (EPA) administered the construction grant program by providing assistance directly to municipalities for wastewater treatment projects. (Federal funds for the program were and still are channeled through EPA's annual appropriations.) Since 1972, the Congress has appropriated about \$65 billion to assist localities in complying with the CWA.

The Clean Water Act, as amended in 1987, phased out Title II grants and authorized a new grant program under Title VI to support state revolving funds (SRFs) for water pollution control. In the new regime, states continue to receive federal grants but

are now responsible for developing and operating their own programs. For each dollar of Title VI grant money that a state receives, it must contribute 20 cents to its SRF. States then use the combined funds to make low-interest loans to communities to construct or upgrade municipal wastewater treatment facilities. Local agencies that borrow funds from the SRF for construction must repay them, thus creating a revolving source of capital for other local communities.

The Congressional Budget Office has projected that support for federal grants for water infrastructure will continue at the 1995 level of \$3 billion, adjusted for inflation. Ending all funding of new water infrastructure projects after 1995 would save \$181 million in 1996 and \$8.1 billion through 2000 measured from the 1995 funding level. Measured from the 1995 level adjusted for inflation, savings would be \$187 million in 1996 and \$8.7 billion over the five-year period.

Federal contributions to the SRFs were intended to help in the transition to full state and local financing of the funds by 1995. Proponents of eliminating federal grants to SRFs argue that the program was meant to be temporary and may have replaced, rather than supplemented, state and local spending. They also point out that in some cases, the grants may have encouraged inefficient treatment decisions by making it possible for SRFs to loan money at below-market rates of interest. Below-market rates could reduce