

Presidential Documents

Title 3—

Executive Order 12902 of March 8, 1994

The President

Energy Efficiency and Water Conservation at Federal Facilities

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Energy Policy and Conservation Act (Public Law 94-163, 89 Stat. 871, 42 U.S.C. 6201 *et seq.*) as amended by the Energy Policy Act of 1992 (Public Law 102-486, 106 Stat. 2776) and section 301 of title 3, United States Code, I hereby order as follows:

PART 1—DEFINITIONS

For the purposes of this order:

Section 101. The “Act” means the Federal energy management provisions of the Energy Policy and Conservation Act, as amended by the Energy Policy Act of 1992.

Sec. 102. The term “comprehensive facility audit” means a survey of a building or facility that provides sufficiently detailed information to allow an agency to enter into energy or water savings performance contracts or to invite inspection and bids by private upgrade specialists for direct agency-funded energy or water efficiency investments. It shall include information such as the following:

(a) the type, size, energy use, and performance of the major energy using systems and their interaction with the building envelope, the climate and weather influences, usage patterns, and related environmental concerns;

(b) appropriate energy and water conservation maintenance and operating procedures;

(c) recommendations for the acquisition and installation of energy conservation measures, including solar and other renewable energy and water conservation measures; and

(d) a strategy to implement the recommendations.

Sec. 103. The term “cost-effective” means providing a payback period of less than 10 years, as determined by using the methods and procedures developed pursuant to 42 U.S.C. 8254 and 10 CFR 436.

Sec. 104. The term “demand side management” refers to utility-sponsored programs that increase energy efficiency and water conservation or the management of demand. The term includes load management techniques.

Sec. 105. The term “energy savings performance contracts” means contracts that provide for the performance of services for the audit, design, acquisition, installation, testing, operation, and, where appropriate, maintenance and repair, of an identified energy or water conservation measure or series of measures at one or more locations.

Sec. 106. The term “agency” means an executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

Sec. 107. The term “Federal building” means any individual building, structure, or part thereof, including the associated energy or water-consuming support systems, which is constructed, renovated, or purchased in whole or in part for use by the Federal Government and which consumes energy

or water. In any provision of this order, the term "Federal building" shall also include any building leased in whole or in part for use by the Federal Government where the term of the lease exceeds 5 years and the lease does not prohibit implementation of the provision in question.

Sec. 108. The term "Federal facility" means any building or collection of buildings, grounds, or structure, as well as any fixture or part thereof, which is owned by the United States or any Federal agency or which is held by the United States or any Federal agency under a lease-acquisition agreement under which the United States or a Federal agency will receive fee simple title under the terms of such agreement without further negotiation. In any provision of this order, the term "Federal facility" shall also include any building leased in whole or in part for use by the Federal Government where the term of the lease exceeds 5 years and the lease does not prohibit implementation of the provision in question.

Sec. 109. The term "franchising" means that an agency would provide the services of its employees to other agencies on a reimbursable basis.

Sec. 110. The term "gainsharing" refers to incentive systems that allocate some portion of savings resulting from gains in productivity to the workers who produce those gains.

Sec. 111. The term "industrial facilities" means any fixed equipment, building, or complex for the production of goods that uses large amounts of capital equipment in connection with, or as part of, any process or system, and within which the majority of energy use is not devoted to the heating, cooling, lighting, ventilation, or to service the hot water energy load requirements of the building.

Sec. 112. The term "life cycle cost" refers to life cycle cost calculated pursuant to the methodology established by 10 CFR 436.11.

Sec. 113. The term "prioritization survey" means a rapid assessment that will be used by an agency to identify those facilities with the highest priority projects based on the degree of cost effectiveness and to schedule comprehensive facility audits prior to project implementation. The prioritization survey shall include information such as the following:

(a) the type, size, energy and water use levels of the major energy and water using systems in place at the facility; and

(b) the need, if any, for acquisition and installation of cost-effective energy and water conservation measures, including solar and other renewable energy resource measures.

Sec. 114. The term "shared energy savings contract" refers to a contract under which the contractor incurs the cost of implementing energy savings measures (including, but not limited to, performing the audit, designing the project, acquiring and installing equipment, training personnel, and operating and maintaining equipment) and in exchange for providing these services, the contractor gains a share of any energy cost savings directly resulting from implementation of such measures during the term of the contract.

Sec. 115. The term "solar and other renewable energy sources" includes, but is not limited to, agriculture and urban waste, geothermal energy, solar energy, and wind energy.

Sec. 116. The term "utility" means any person, State, or agency that is engaged in the business of producing or selling electricity or engaged in the local distribution of natural gas or water to any ultimate consumer.

Part 2—INTERAGENCY COORDINATION

Sec. 201. *Interagency Coordination.* The Department of Energy ("DOE") shall take the lead in implementing this order through the Federal Energy Management Program ("FEMP"). The Interagency Energy Policy Committee ("656 Committee") and the Interagency Energy Management Task Force ("Task Force") shall serve as forums to coordinate issues involved in implementing

energy efficiency, water conservation, and solar and other renewable energy in the Federal sector.

PART 3—AGENCY GOALS AND REPORTING REQUIREMENTS FOR ENERGY AND WATER EFFICIENCY IN FEDERAL FACILITIES

Sec. 301. Energy Consumption Reduction Goals. (a) Each agency shall develop and implement a program with the intent of reducing energy consumption by 30 percent by the year 2005, based on energy consumption per-gross-square-foot of its buildings in use, to the extent that these measures are cost-effective. The 30 percent reductions shall be measured relative to the agency's 1985 energy use. Each agency's implementation program shall be designed to speed the introduction of cost-effective, energy-efficient technologies into Federal facilities, and to meet the goals and requirements of the Act and this order.

(b) Each agency shall develop and implement a program for its industrial facilities in the aggregate with the intent of increasing energy efficiency by at least 20 percent by the year 2005 as compared to the 1990 benchmark, to the extent these measures are cost-effective, and shall implement all cost-effective water conservation projects. DOE, in coordination with the 656 Committee, shall establish definitions and appropriate indicators of energy and water efficiency, and energy and water consumption and costs, in Federal industrial facilities for the purpose of establishing a base year of 1990.

Sec. 302. Energy and Water Surveys and Audits of Federal Facilities. (a) *Prioritization Survey.* Each agency responsible for managing Federal facilities shall conduct a prioritization survey, within 18 months of the date of this order, on each of the facilities the agency manages. The surveys shall be used to establish priorities for conducting comprehensive facility audits.

(b) *Comprehensive Facility Audits.* Each agency shall develop and begin implementing a 10-year plan to conduct or obtain comprehensive facility audits, based on prioritization surveys performed under section 302(a) of this order.

(1) Implementation of the plan shall ensure that comprehensive facility audits of approximately 10 percent of the agency's facilities are completed each year. Agencies responsible for managing less than 100 Federal facilities shall plan and execute approximately 10 comprehensive facility audits per year until all facilities have been audited.

(2) Comprehensive audits of facilities performed within the last 3 years may be considered current for the purposes of implementation.

(3) "No-cost" audits, such as those outlined in section 501(c) of this order, shall be utilized to the extent practicable.

(c) *Exempt Facilities.* Because the mission within facilities exempt from the energy and water reduction requirements under the Act may not allow energy efficiency and water conservation in certain operations, actions shall be taken to reduce all other energy and water waste using the procedures described in the Act and this order. Each agency shall develop and implement a plan to improve energy and water efficiency in such exempt facilities. The prioritization surveys are intended to allow agencies to refine their designation of facilities as "exempt" or "industrial," so that only individual buildings in which industrial or energy-intensive operations are conducted remain designated as "exempt" or "industrial." Within 21 months of the date of this order, each agency shall report to FEMP and to the Office of Management and Budget ("OMB") the redesignations that the agency is making as a result of the prioritization surveys. Agencies may seek exemptions for their facilities pursuant to the Energy Policy and Conservation Act, as amended.

(d) *Leased Facilities.* Agencies shall conduct surveys and audits of leased facilities to the extent practicable and to the extent that the recommendations

of such surveys and audits could be implemented under the terms of the lease.

Sec. 303. *Implementation of Energy Efficiency and Water Conservation Projects.* (a) *Implementation of New Audit Recommendations.* Within 1 year of the date of this order, agencies shall identify, based on preliminary recommendations from the prioritization surveys required under section 302 of this order, high priority facilities to audit and shall complete the first 10 percent of the required comprehensive facility audits. Within 180 days of the completion of the comprehensive facility audit of each facility, agencies shall begin implementing cost-effective recommendations for installation of energy efficiency, water conservation, and renewable energy technologies for that facility.

(b) *Implementation of Existing Audits.* Within 180 days of the date of this order, agencies shall begin to implement cost-effective recommendations from comprehensive audits of facilities performed within the past 3 years, for installation of energy efficiency, water conservation, and renewable energy technologies.

Sec. 304. *Solar and Other Renewable Energy.* The goal of the Federal Government is to significantly increase the use of solar and other renewable energy sources. DOE shall develop a program for achieving this goal cost-effectively and, within 210 days of the date of this order, submit the program to the 656 Committee for review. DOE shall lead the effort to assist agencies in meeting this goal.

Sec. 305. *Minimization of Petroleum-Based Fuel Use in Federal Buildings and Facilities.* All agencies shall develop and implement programs to reduce the use of petroleum in their buildings and facilities by switching to a less-polluting and nonpetroleum-based energy source, such as natural gas or solar and other renewable energy sources. Where alternative fuels are not practical or cost-effective, agencies shall strive to improve the efficiency with which they use the petroleum. Each agency shall survey its buildings and facilities that utilize petroleum-based fuel systems to determine where the potential for a dual-fuel capability exists and shall provide dual-fuel capability where cost-effective and practicable.

Sec. 306. *New Space.* (a) *New Federal Facility Construction.* Each agency involved in the construction of a new facility that is to be either owned by or leased to the Federal Government shall:

(1) design and construct such facility to minimize the life cycle cost of the facility by utilizing energy efficiency, water conservation, or solar or other renewable energy technologies;

(2) ensure that the design and construction of facilities meet or exceed the energy performance standards applicable to Federal residential or commercial buildings as set forth in 10 CFR 435, local building standards, or a Btu-per-gross-square-foot ceiling as determined by the Task Force within 120 days of the date of this order, whichever will result in a lower life cycle cost over the life of the facility;

(3) establish and implement, within 270 days of the date of this order, a facility commissioning program that will ensure that the construction of such facilities meets the requirements outlined in this section before the facility is accepted into the Federal facility inventory; and

(4) utilize passive solar design and adopt active solar technologies where they are cost-effective.

(b) *New Leases For Existing Facilities.* To the extent practicable and permitted by law, agencies entering into leases, including the renegotiation or extension of existing leases, shall identify the energy and water consumption of those facilities and seek to incorporate provisions into each lease that minimize the cost of energy and water under a life cycle analysis, while maintaining or improving occupant health and safety. These requirements may include renovation of proposed space prior to or within the first year of each lease. Responsible agencies shall seek to negotiate the

cost of the lease, taking into account the reduced energy and water costs during the term of the lease.

(c) *Government-Owned Contractor-Operated Facilities.* All Government-owned contractor-operated facilities shall comply with the goals and requirements of this order. Energy and water management goals shall be incorporated into their management contracts.

Sec. 307. Showcase Facilities. (a) *New Building Showcases.* When an agency constructs at least five buildings in a year, it shall designate at least one building, at the earliest stage of development, to be a showcase highlighting advanced technologies and practices for energy efficiency, water conservation, or use of solar and other renewable energy.

(b) *Demonstrations in Existing Facilities.* Each agency shall designate one of its major buildings to become a showcase to highlight energy or water efficiency and also shall attempt to incorporate cogeneration, solar and other renewable energy technologies, and indoor air quality improvements. Selection of such buildings shall be based on considerations such as the level of nonfederal visitors, historic significance, and the likelihood that visitors will learn from displays and implement similar projects. Within 180 days of the date of this order, each agency shall develop and implement plans and work in cooperation with DOE and, where appropriate, in consultation with the General Services Administration ("GSA"), the Environmental Protection Agency ("EPA"), and other appropriate agencies, to determine the most effective and cost-effective strategies to implement these demonstrations.

Sec. 308. Annual Reporting Requirements. (a) As required under the Act, the head of each agency shall report annually to the Secretary of Energy and OMB, in a format specified by the Secretary and OMB after consulting with the 656 Committee. The report shall describe the agency's progress in achieving the goals of this order.

(b) The Secretary of Energy shall report to the President and the Congress annually on the implementation of this order. The report should provide information on energy and water use and cost data and shall provide the greatest level of detail practicable for buildings and facilities by energy source.

Sec. 309. Report on Full Fuel Cycle Analysis. DOE shall prepare a report on the issues involved in instituting life cycle analysis for Federal energy and product purchases that address the full fuel cycle costs, including issues concerning energy exploration, development, processing, transportation, storage, distribution, consumption, and disposal, and related impacts on the environment. The report shall examine methods for conducting life cycle analysis and implementing such analysis in the Federal sector and shall make appropriate recommendations. The report shall be forwarded to the President for review.

Sec. 310. Agency Accountability. One year after the date of this order, and every 2 years thereafter, the President's Management Council shall report to the President about efforts and actions by agencies to meet the requirements of this order. In addition, each agency head shall designate a senior official, at the Assistant Secretary level or above, to be responsible for achieving the requirements of this order and shall appoint such official to the 656 Committee. The 656 Committee shall also work to ensure the implementation of this order. The agency senior official and the 656 Committee shall coordinate implementation with the Federal Environmental Executive and Agency Environmental Executives established under Executive Order No. 12873.

PART 4—USE OF INNOVATIVE FINANCING AND CONTRACTUAL MECHANISMS

Sec. 401. Financing Mechanisms. In addition to available appropriations, agencies shall utilize innovative financing and contractual mechanisms, including, but not limited to, utility demand side management programs,

shared energy savings contracts, and energy savings performance contracts, to meet the goals and requirements of the Act and this order.

Sec. 402. *Workshop for Agencies.* Within a reasonable time of the date of this order, the Director of OMB, or his or her designee, and the Task Force shall host a workshop for agencies regarding financing and contracting for energy efficiency, water efficiency, and renewable technology projects. Based on the results of that meeting, the Administrator, Office of Procurement Policy ("OFPP"), shall assist the Administrator of General Services and the Secretary of Energy in eliminating unnecessary regulatory and procedural barriers that slow the utilization of such audit, financing, and contractual mechanisms or complicate their use. All actions that are cost-effective shall be implemented through the process required in section 403 of this order.

Sec. 403. *Elimination of Barriers.* Agency heads shall work with their procurement officials to identify and eliminate internal regulations, procedures, or other barriers to implementation of the Act and this order. DOE shall develop a model set of recommendations that will be forwarded to the Administrator of OFPP in order to assist agencies in eliminating the identified barriers.

PART 5—TECHNICAL ASSISTANCE, INCENTIVES, AND AWARENESS

Sec. 501. *Technical Assistance.* (a) To assist Federal energy managers in implementing energy efficiency and water conservation projects, DOE shall, within 180 days of the date of this order, develop and make available through the Task Force:

(1) guidance explaining the relationship between water use and energy consumption and the energy savings achieved through water conservation measures;

(2) a model solicitation and implementation guide for innovative funding mechanisms referenced in section 401 of this order;

(3) a national list of companies providing water services in addition to the list of qualified energy service companies as required by the Act;

(4) the capabilities and technologies available through the national energy laboratories; and

(5) an annually-updated guidance manual for Federal energy managers that includes, at a minimum, new sample contracts or contract provisions, position descriptions, case studies, recent guidance, and success stories.

(b) The Secretary of Energy, in coordination with the Administrator of General Services, shall make available through the Task Force, within 180 days of the date of this order:

(1) the national list of qualified water and energy efficiency contractors for inclusion on a Federal schedule; and

(2) a model provision on energy efficiency and water conservation, for inclusion in new leasing contracts.

(c) Within 180 days of the date of this order, the Administrator of General Services shall:

(1) contact each utility that has an area-wide contract with GSA to determine which of those utilities will perform "no-cost" audits for energy efficiency and water conservation and potential solar and other renewable energy sources that comply with Federal life cycle costing procedures set forth in Subpart A, 10 CFR 436;

(2) for each energy and water utility serving the Federal Government, determine which of those utilities offers demand-side management services and incentives and obtain a list and description of those services and incentives; and

(3) prepare a list of those utilities and make that list available to all Federal property management agencies through the Task Force.

(d) Within 18 months of the date of this order, the Administrator of General Services, in consultation with the Secretary of Energy, shall develop procurement techniques, methods, and contracts to speed the purchase and installation of energy, water, and renewable energy technologies in Federal facilities. Such techniques, methods, and contracts shall be designed to utilize both direct funding by the user agency, including energy savings performance contracting, and utility rebates. To the extent permitted by law, the Administrator of OFPP shall assist the Administrator of General Services and the Secretary of Energy by eliminating unnecessary regulatory and procedural barriers that would slow the implementation of such methods, techniques, or contracts or complicate their use.

(e) Agencies are encouraged to seek technical assistance from DOE to develop and implement solar and other renewable energy projects.

(f) DOE shall conduct appropriate training for Federal agencies to assist them in identifying and funding cost-effective projects. This training shall include providing software and other technical tools to audit facilities and identify opportunities. To the extent that resources are available, DOE shall work with utilities and the private sector to encourage their participation in Federal sector programs.

(g) DOE, in coordination with EPA, GSA, and the Department of Defense ("DOD"), shall develop technical assistance services for agencies to help identify energy efficiency, water conservation, indoor air quality, solar and other renewable energy projects, new building design, fuel switching, and life cycle cost analysis. These services shall include, at a minimum, a help line, computer bulletin board, information and education materials, and project tracking methods. Agencies shall identify technical assistance needed to meet the goals and requirements of the Act and this order and seek such assistance from DOE.

(h) The Secretary of Energy and the Administrator of General Services shall explore ways to stimulate energy efficiency, water conservation, and use of solar and other renewable energy sources and shall study options such as new building performance guidelines, life cycle value engineering, and designer/builder incentives such as award fees. The studies shall be completed within 270 days of the date of this order. The OFPP will issue guidance to agencies on life cycle value engineering within 6 months of the completion of the studies.

(i) The Secretary of Energy and the Administrator of General Services shall develop and distribute through the Task Force a model building commissioning program within 270 days of the date of this order.

(j) The lists, guidelines, and services in this section of the order shall be updated periodically.

Sec. 502. Retention of Savings and Rebates. (a) Within a reasonable time after the date of this order, the Director of OMB, along with the Secretary of Energy, the Secretary of Defense, and the Administrator of General Services, to the extent practicable and permitted by law, shall develop guidelines and implement procedures to allow agencies, in fiscal year 1995 and beyond, to retain utility rebates and incentives received by the agency and savings from energy efficiency and water conservation efforts as provided in section 152 of the Energy Policy Act of 1992 and 10 U.S.C. 2865 and 2866.

Sec. 503. Performance Evaluations. To recognize the responsibilities of facility managers, designers, energy managers, their superiors, and, to the extent practicable and appropriate, others critical to the implementation of this order, heads of agencies shall include successful implementation of energy efficiency, water conservation, and solar and other renewable energy projects in their position descriptions and performance evaluations.

Sec. 504. Incentive Awards. Agencies are encouraged to review employee incentive programs to ensure that such programs appropriately reward exceptional performance in implementing the Act and this order. Such awards may include monetary incentives such as Quality Step Increases, leave time

awards and productivity gainsharing, and nonmonetary and honor awards such as increased authority, additional resources, and a series of options from which employees or teams of employees can choose.

Sec. 505. *Project Teams/Franchising.* (a) Agencies are encouraged to establish Energy Efficiency and Environmental Project Teams ("Project Teams") to implement energy efficiency, water conservation, and solar and other renewable energy projects within their respective agencies. DOE shall develop a program to train and support the Project Teams, which should have particular expertise in innovative financing, including shared energy savings and energy savings performance contracting. The purpose of the program is to enable project teams to implement projects quickly and effectively in their own agencies.

(b) Agencies are encouraged to franchise the services of their Project Teams. The ability to access the services of other agencies' teams will foster excellence in project implementation through competition among service providers, while providing an alternative method to meet or exceed the requirements of the Act and this order for agencies that are unable to devote sufficient personnel to implement projects.

Sec. 506. *FEMP Account Managers.* FEMP shall develop a customer service program and assign account managers to agencies or regions so that each project may have a designated account manager. When requested by an agency, the account manager shall start at the audit phase and follow a project through commissioning, evaluation, and reporting. The account manager shall provide technical assistance and shall have responsibility to see that all actions possible are taken to ensure success of the project.

Sec. 507. *Procurement of Energy Efficient Products by Federal Agencies.*

(a) "*Best Practice*" Technologies. Agencies shall purchase energy-efficient products in accordance with the guidelines issued by OMB, in consultation with the Defense Logistics Agency ("DLA"), DOE, and GSA, under section 161 of the Energy Policy Act of 1992. The guidelines shall include listings of energy-efficient products and practices used in the Federal Government. At a minimum, OMB shall update the listings annually. DLA, DOE, and GSA shall update the portions of the listings for which they have responsibility as new products become available and conditions change.

(1) Each agency shall purchase products listed as energy-efficient in the guidelines whenever practicable, and whenever they meet the agency's specific performance requirements and are cost-effective. Each agency shall institute mechanisms to set targets and measure progress.

(2) To further encourage a market for highly-energy-efficient products, each agency shall increase, to the extent practicable and cost-effective, purchases of products that are in the upper 25 percent of energy efficiency for all similar products, or products that are at least 10 percent more efficient than the minimum level that meets Federal standards. This requirement shall apply wherever such information is available, either through Federal or industry-approved testing and rating procedures.

(3) GSA and DLA, in consultation with DOE, other agencies, States, and industry and other nongovernment organizations, shall provide all agencies with information on specific products that meet the energy-efficiency criteria of this section. Product information should be made available in both printed and electronic formats.

(b) *Federal Market Opportunities.* DOE, after consultation with industry, utilities, and other interested parties, shall identify advanced energy-efficient and water-conserving technologies that are technically and commercially feasible but not yet available on the open market. These technologies may include, but are not limited to, the advanced appliance technologies referenced in section 127 of the Energy Policy Act of 1992. DOE, in cooperation with OMB, GSA, DOD, the National Institute of Standards and Technology ("NIST"), and EPA, shall issue a "Federal Procurement Challenge" inviting each Federal agency to commit a specified fraction of their purchases within

a given time period to advanced, high-efficiency models of products, provided that these anticipated future products can meet the agency's energy performance, functionality, and cost requirements.

(c) *Accelerated Retirement of Inefficient Equipment.* DOE, in consultation with GSA and other agencies, shall establish guidelines for the cost-effective early retirement of older, inefficient appliances and other energy and water-using equipment in Federal facilities. Such guidelines may take into account significant improvements in energy efficiency and water conservation, opportunities to down-size or otherwise optimize the replacement equipment as a result of associated improvements in building envelope, system, or industrial process efficiency and reductions in pollutant emissions, use of chlorofluorocarbons, and other environmental improvements.

(d) *Review of Barriers.* Each agency shall review and revise Federal or military specifications, product descriptions, and standards to eliminate barriers to, and encourage Federal procurement of, products that are energy-efficient or water conserving.

PART 6—WAIVERS

Sec. 601. Waivers. Each agency may determine whether certain requirements in this order are inconsistent with the mission of the agency and seek a waiver of the provision from the Secretary of Energy. Any waivers authorized by the Secretary of Energy shall be included in the annual report on Federal energy management required under the Act.

PART 7—REVOCATION, LIMITATION, AND IMPLEMENTATION

Sec. 701. Executive Order No. 12759, of April 17, 1991, is hereby revoked, except that sections 3, 9, and 10 of that order shall remain effective and shall not be revoked.

Sec. 702. This order is intended only to improve the internal management of the executive branch and is not intended to, and does not create, any right to administrative or judicial review, or any other right or benefit or trust responsibility, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

Sec. 703. This order shall be effective immediately.



THE WHITE HOUSE,
March 8, 1994.