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**Position Statement on the  
U.S. Department of Energy Fiscal Year 2015 Budget Request  
submitted by  
ASME Energy Public Policy Task Force**

May 7, 2014

Mr. Chairman, Ranking Member, and Members of the Subcommittee:

The ASME Energy Public Policy Task Force (Task Force) of ASME's Board on Government Relations is pleased to provide this testimony on the Fiscal Year 2015 budget request for research and development (R&D) programs in the Department of Energy (DOE).

Introduction

ASME is a more than 130,000-member nonprofit, worldwide educational and technical Society. It conducts one of the world's largest technical publishing operations, holds more than 30 technical conferences and 200 professional development courses each year, and sets some 600 industrial and manufacturing standards, many of which have become *de facto* global technical standards.

ASME has long advocated a balanced portfolio of energy supplies to meet the nation's energy needs, including advancing clean coal, petroleum, nuclear, natural gas, waste-to-energy, biomass, solar, wind, and hydroelectric power technologies. ASME also supports energy efficient building and transportation technologies, as well as transmission and distribution infrastructure sufficient to satisfy demand under reasonably foreseeable contingencies. A balanced energy portfolio will allow the U.S. to maintain its quality of life while addressing our environmental and security challenges. Sustained growth in the energy systems on which the U.S. depends will also require stability in licensing and permitting processes not only for power generating stations but also for transmission and transportation systems.

Electricity Delivery and Energy Reliability

The FY 2015 budget request of \$180 million for Electricity Delivery (OE) is a \$32.7 million, or 22 percent, increase over the FY 2014 appropriated amount of \$147.2 million. The Task Force is pleased by the level of interagency coordination being led by OE, particularly related to transmission siting, cyber security, FEMA, and the Department of Defense. The Task Force believes advances in power electronics and microgrids are going to be critical elements of a future more modern electric grid, and, therefore, very pleased to see that the OE budget seeks \$24.4 million to support the Smart Grid Research and Development area. Similarly, the Task Force

fully supports the large increased request of \$22.6 million for Infrastructure Security and Energy Restoration.

### Fossil Energy

The FY 2015 budget request of \$475.5 million for fossil energy represents an \$86.4 million, or 15.4 percent decrease compared to the FY14 amount of \$562 million.

The Task Force is pleased to support the establishment of a new demonstration program for Natural Gas Carbon Capture and Storage, proposed for initial funding at \$25 million. In related efforts, we are pleased that the Administration has requested a \$35 million (or 70 percent) increase for Natural Gas Technologies program in FY15, a break from recent requests which sought to eliminate the program. However, Unconventional Fossil Energy Technologies would again be targeted for elimination in FY15, after receiving less than \$15 million in funding for FY14, and only \$4.6 million in FY13. The U.S. has access to significant unconventional gas resources with the potential to provide abundant, affordable, clean low-carbon energy source for years to come. Prior FE R&D has contributed to making this possible. However, this potential will not be realized unless this resource can be produced reliably, economically, safely and with minimal environmental impact. Accomplishing this task and keeping the U.S. in the forefront of unconventional fossil energy technology will require an investment in basic research, technology development, and investments in advances in low impact environmental technologies that will not be undertaken by industry in the current economic climate.

The Task Force recommends funding for the Coal CCS and Power Systems program above the level of \$392 million enacted for FY 2014. Funding at the \$392 million level is not sufficient to keep the U.S. in the forefront of clean coal technology. Coal is, and will remain, a critical resource for our nation and the global energy economy. We must continue to invest in technological advancements that will reduce the environmental impacts of this energy. The use of more efficient processes for coal combustion, such as advanced integrated gasification combined cycle (IGCC) technology, combined with carbon sequestration will allow the U.S. to utilize its coal resources in a more environmentally sound and cost effective manner. We encourage strong and consistent funding for these programs now and in future years.

### Advanced Research Projects Agency-Energy (ARPA-E)

The Task Force strongly supports the \$325 million budget request for the Advanced Research Projects Agency-Energy (ARPA-E), a \$45 million or 16 percent increase over the FY14 appropriated amount. ARPA-E received its first funding as part of ARRA, but has stood out quickly among its fellow DOE programs. ARPA-E represents a significant opportunity for the U.S. to cultivate technological breakthroughs related to energy sources, and uses. A steady commitment to ARPA-E has begun to encourage new energy technology innovation and the Task Force believes that this is a worthwhile endeavor for the DOE as we seek to accomplish technological breakthroughs in energy technology research.

### Nuclear Energy

Total funding for the DOE Office of Nuclear Energy for FY15 would fall to \$863.3 million, a 2.8 percent decrease. The Task Force remains convinced that nuclear energy will hold an important

role in the nation's energy future. Programs like Reactor Concepts (slated for an 11 percent budget cut) and Fuel Cycle R&D need sustained funding to aid the nation's transition to a low-carbon energy future. Lack of funding for nuclear energy research may adversely impact the ability of the current US fleet to continue to operate past its 60 year life. The loss of funding may also contribute to the loss of the US nuclear technology competitive edge.

### Energy Efficiency and Renewable Energy

The Office of Energy Efficiency and Renewable Energy (EERE) manages America's investments in research, development and deployment of DOE's diverse energy efficiency and renewable energy applied science portfolio. The FY 2015 budget request of \$2.31 billion, a \$416 million, or 22 percent, increase over the FY 2014 appropriated amount of \$1.9 billion, demonstrates the Administration's strong commitment to clean energy technology development. Most of the key EERE programs, including Bioenergy, Solar, Wind, Geothermal, Building Technologies, Vehicle Technologies, and Advanced Manufacturing technologies, receive substantial increases in funding to support the growth of renewable energy and energy efficiency. The Task Force is particularly pleased to see large increases for both the Advanced Manufacturing program (\$305 million, or a 69 percent increase), formerly known as the Industrial Technologies Program (ITP), as well as the Building Technologies Program (\$211.7 million, or a 19 percent increase).

The Task Force believes that the development of transportation fuel systems that are not petroleum-based is a critical part of our future national energy policy. The budget for Vehicle Technologies R&D is slated to receive a \$69.2 million increase to \$359 million for FY15, 24 percent above the FY14 appropriated amount.

The integration of all cost effective electric generating technologies into the operation of the electricity distribution system is critical to economic operation of the national electric grid. The Task Force believes that R&D related to the integration of the electric grid and its control as a truly national system is imperative for the growth of effective and economic energy generation technologies and we encourage full funding for such research.

### Science

The mission of the Office of Science (SC) is the delivery of scientific discoveries and major scientific user facilities and tools to transform our understanding of nature and to advance the energy, economic, and national security of the United States. The FY15 budget proposal of \$5.1 billion is an increase of \$44.7 million, or 0.9 percent, from the FY14 appropriation.

As successive budget cycles come and go, the nation is getting further away from the funding trajectories necessary to sustain long-term energy innovation. Science programs in high energy physics, fusion energy sciences, biological and environmental research, basic energy sciences, and advanced scientific computing, serve, in some small way, every student in the country. These funds support not only research at the DOE Laboratories, but also the work at a large number of universities and colleges.

The Task Force encourages Congress to find additional funding for SC programs in the FY15 budget. While most SC programs are maintained with at least a 3 percent budget increase to account for inflation, Fusion Energy Sciences, High Energy Physics, Workforce Development

for Teachers and Scientists, and Science Laboratories Infrastructure would all receive substantial decreases under this budget. The Task Force respects the Office of Science's overall goals, particularly those related to Advanced Scientific Computing Research and Basic Energy Sciences, but urges a restoration of funding for these reduced programs at FY14 levels.

#### Other DOE Programs

DOE is also very active in areas outside of R&D. The environmental remediation program that funds the decommissioning and decontamination of old DOE facilities is one such research area. The Task Force urges close oversight of funding for the Environmental Management program, requested at 5.6 billion for FY15, a 3.6 percent reduction.

#### Conclusion

Members of the Task Force consider the issues related to energy to be one of the most important issues facing our nation. There is an urgent need for more coherent national energy policies. The Task Force is concerned that without a National Energy Policy, proposed and ongoing research will not be utilized to its full potential. We applaud the Administration and Congress for their understanding of the important role that scientific and engineering breakthroughs will play in meeting our energy challenges. To promote such innovation, strong support for energy research will be necessary across a broad range of technology options. DOE research can play a critical role in allowing the U.S. to use our current resources more effectively and to create more advanced energy technologies.

Thank you for the opportunity to offer testimony regarding both the R&D and other parts of the proposed budget for the DOE. The Task Force is pleased to respond to requests for additional information or perspectives on other aspects of our nation's energy programs.

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*This statement represents the views of the Energy Public Policy Task Force of ASME's Board on Government Relations and is not necessarily a position of ASME as a whole.*