

Statement of Arun Majumdar  
Nominee for Director of Advanced Research Projects Agency – Energy  
Senate Committee on Energy and Natural Resources  
October 8, 2009

Chairman Bingaman, Ranking Member Murkowski, and distinguished members of this committee, it is my distinct honor and privilege to appear before you today as President Obama's nominee to be the first Director of the Advanced Research Projects Agency – Energy or ARPA-E.

I wish to thank President Obama for nominating me to join his administration, and Secretary Chu, first for inspiring me and many others at Berkeley, and now for showing his confidence in me.

Please allow me to introduce my wife of 19 years, Dr. Aruna Joshi, and our two daughters, Shalini and Anjali. My 76-year old mother sends her regrets to you that she could not be here today.

Almost a quarter century ago, I came to this country from the land of Mahatma Gandhi as a 22-year old graduate student, hoping to receive a doctorate from the best higher education and research system in the world. This was a dream that my father had for me. He came to this country in 1957 to receive an education in telecommunication and radar, and returned to India two years later with many friendships and a deep admiration for the people of this country. In the wildest of dreams, however, I am not sure he could have predicted that I would appear before you today.

In the course of my journey, I have discovered not only the scientific and technological prowess of this great nation, but also a country that opened its arms, welcomed me warmly, and adopted me as one of her own. I am proud to be a naturalized citizen of the United States of America. I am deeply appreciative of the opportunity and the freedom that the country has offered me, and will always be honored to serve in any capacity the country asks of me.

After receiving my PhD in Mechanical Engineering at the University of California, Berkeley, I spent my career in academia, spanning Arizona State University, University of California, Santa Barbara and finally at Berkeley. I have been very fortunate to work with some of the smartest minds in science and engineering, including many PhDs, post-doctoral fellows, other faculty and industrial scientists, and hundreds of undergraduate students. I have been advisor for both science and engineering at the Department of Energy, the National Science Foundation, for PCAST and for various startup companies and venture capital firms in the Bay Area, which is the world's most vibrant ecosystem for technological and business innovation.

The focus of my work has always been to solve industrial or societal problems, and to dig deep into science when faced with difficult technical challenges. I have risked delving into new fields of research where I had no background, and have thrived on quickly

learning the landscape and opening new paths where previously none existed. For these contributions, I was elected as one of the youngest members to the National Academy of Engineering, which is the nation's highest honor in engineering. I have served as the director of several institutes both in academia and in professional organizations, and have more recently led the energy efficiency innovation efforts at Berkeley Labs. In February of this year, I testified before this committee on how to reduce energy consumption in buildings. If confirmed, I will bring this breadth and depth of knowledge in science, engineering, and management of technological innovation to lead ARPA-E from its genesis.

One of the models for ARPA-E is DARPA, which was created in 1958 in response to the launch of Sputnik. This committee and others were instrumental in authorizing ARPA-E, and pointing it to address three "Sputniks" of our generation: (i) energy independence and security; (ii) reduction of greenhouse gas emissions; (iii) American competitiveness in the global energy and environment market.

The goal of ARPA-E is to identify and anticipate technological barriers and gaps that impede progress towards these objectives and to rapidly innovate to overcome or circumvent them. ARPA-E will complement existing R & D programs by drawing upon the scientific discoveries and combining them with new engineering approaches to create innovative solutions for the market. Speed, calculated risks, internal competition, and agility will be the keys to the technological innovations that will mark our success. Our nation's history is replete with examples of pioneers and entrepreneurs who took risks, often failed initially, quickly learned from those failures, competed against each other, and innovated in both technology and business to create the largest industrial base the world has ever seen. If confirmed, I will lead ARPA-E to tap into this truly American ethos and identify and support the pioneers of the future.

I believe that the nation that creates an economy based on reduced energy consumption, clean energy supply, and a smart energy infrastructure will lead the global economy of the 21<sup>st</sup> century. With the best R&D infrastructure in the world and a thriving innovation ecosystem in business and entrepreneurship, we have all the ingredients for success and we have made a great start.

ARPA-E can play a critical role in accelerating progress towards these goals. The program has taken its first steps this year, and if confirmed, I pledge to use all my knowledge, expertise, and experience to help grow ARPA-E into a robust engine of American innovation in energy and environment.

It is a privilege and an honor to testify before you today, and I look forward to answering any questions you may have. Thank you.