

Thank you for inviting me to speak at the first Annual Meeting of the NEES Consortium. NEES carries the name of my late husband Congressman George E. Brown, Jr. Therefore, it seems appropriate to provide you with a brief background about him.

Congressman Brown was best known in the Congress for his work on science and technology issues. Respected by both sides of the aisle, Democrats and Republicans alike noted his dedication and integrity. An ardent student of history, often quoting early Greek philosophers, he urged us to learn from history and not repeat the same mistakes.

In the science community and in the Congress, he was revered as "Mr. Science" providing an unusual fit between the science community and the legislative branch of government. During his 34 years in congress, he was a recognized leader in forming the institutional framework for science and technology in the Federal Government. He had a broad range of interests in science and his legislative work reflected it.

In the mid-1960s, and again in the 1980s, he led an effort to restructure and strengthen the National Science Foundation, moving the agency into much more active roles in engineering, science education, and the development of advanced technologies. He developed legislation shaping the permanent science advisory mechanism in the Executive Office of the President, which was established in 1976 as the Office of Science and Technology Policy. As an energetic proponent of environmental preservation and of science and technology in the service of society, he championed the establishment of the Environmental Protection Agency and the Office of Technology Assessment in the early 1970s

He was an advocate of strategic planning and Congressional foresight. Ahead of the mainstream agenda, he recognized early on the environmental hazards of burning fossil fuels, the destructive effect of freons on the ozone layer, the importance of keeping space development under civilian control, and the necessity of monitoring global climate change. In due course, Congress adopted provisions in the Clean Air Act to protect the ozone layer from freons; passed a national climate monitoring program; funded research and development programs in hydrogen, hydrothermal, geothermal, photovoltaic, and wind energy; and developed a global change research program. He also helped direct the Congress toward initiatives for energy and resource conservation, sustainable agriculture, national information systems, advanced technology development, and the integration of technology in education. Throughout his career, Brown enthusiastically supported both manned and unmanned space exploration. He also developed plans to improve U.S. manufacturing capability, maintain the Landsat remote-sensing system, and restructure the national weapons laboratories in a peacetime economy. Late in his career, he was active in promoting international scientific cooperation, authoring legislation establishing

joint research programs between U.S. researchers and their counterparts in Mexico and Russia

His involvement in the field of earthquake legislation is legendary. However, it is worth reviewing a portion of his early actions because it laid the groundwork for where we are today. In the late 1970s, Senator Alan Cranston of California and Congressman Brown introduced the legislation for the Earthquake Hazards Reduction Program. In 1977, the Congress enacted the Earthquake Hazards Reduction Act that implemented the National Earthquake Hazards Reduction Program (NEHRP)

I would like to share Congressman Brown's opening remarks to the Basic Research Subcommittee of the Committee on Science in 1997, on the 20th year of the National Earthquake Hazards Reduction Program (NEHRP).

"If one is not convinced of the superiority of earthquake preparedness now than in previous decades, one has only to look at a comparison with earthquakes abroad where thousands die in collapsed buildings and resulting fires from even small earthquakes that are routinely weathered in the United States with little impact.

Here in Congress, this Committee has tried to learn alongside the scientific community from each earthquake event and as advances occur in the fields of geology and engineering. The Committee has also tried to support these research communities; consistently passing authorization bills with language that expands the scope and resources of NEHRP. However, as with all preparations for natural disasters, the most effort occurs right after an event strikes; then the activity rapidly diminishes until spiked by the next disaster.

Unfortunately, in the research arena, such waxing and waning of support is particularly devastating to scientific infrastructure, both human and capital. Students cannot be supported by periodic bursts of funding nor can large research facilities and programs. Thus, the community must realistically plan for a small, but significant, level of funding, with occasional riches coming at unpredictable times. This Committee hopes to help NEHRP prepare and plan for the base program. But more importantly, the Committee must also do its best to secure funding for research when the floodgates inevitably open after a disaster. It is our job as politicians and as the overseers of these activities.

Thus, today I will ask many questions, if my schedule allows. These questions will concern primarily the Earthquake Engineering proposal in front of the NSF Major Research Equipment account. As many of you know, I have a long-standing interest in this proposal, which seeks to bring U.S. earthquake engineering test facilities up to par. However, I would also like to ask each of the witnesses what their disciplines should do with a small infusion of funds that may come their way after the next major earthquake. Even though it may be a

gruesome, or perhaps cold and calculating, way to think, over my 32 years in Congress, I have always hoped to be a practical politician, and this approach seems eminently practicable. Basically, I would like to hear your ideas, so that the Committee can make the best of a bad situation - when another earthquake strikes in the United States - and not be lost in the dust."

Congressman Brown also had a long and rich history on non-science issues spanning many important events and eras of modern American political life. He grew up during the Depression in Holtville, a part of the Imperial Valley agricultural area of California near the Mexican border. Brown was a graduate of the University of California at Los Angeles, where he helped create some of the first cooperative student housing and broke the racial color barrier by organizing the first integrated campus housing in the late 1930's. He organized L.A. City workers in the 1940s, worked on reforming the California Democratic Party in the 1950s, carried the struggle for civil rights and against the Vietnam War in the 1960s and 1970s and established more intelligent public policy to support science, clean up the environment and expand economic opportunity in the 1980s and 1990s

Mr. Brown believed public service was a noble calling, that an individual could make a difference and that through persuasion and reason we could build a better society. Media advisors, sound bites or polls were never used to set his positions. Congressman Brown consulted his knowledge of history, the details of the issue and his conscience in setting his own course. His approach to campaigning was to be as candid as possible and rely on the good judgment of the people. This style served him well through every election since 1962, despite repeated forecasts of his impending political demise. To the end of his life, he remained enormously grateful to the electorate of the Inland Empire for their faith in him

During each congress, there were budgetary considerations that affected the ability of the various agencies to meet their task. Sometimes if funding was restored, programs continued their mission and, if not, the programs were placed on hold. Congressman Brown would stress in public speeches to science organizations, the need to educate the public and decision makers about the importance of science research so that decisions regarding the federal dollar could occur on more informed basis. The situation has not changed and is perhaps more critical now with his absence. With the broad network of research institutions represented here, let me urge you as Congressman Brown would have to become acquainted with the elected leadership of your respective communities, let them know of your work and the economic impact that your program has on their constituency. Keep in mind that as the memories of disasters fade so does the commitment of time and resources necessary to prepare against the next disaster.

As mentioned in my introduction, I am the President of the Brown Foundation, a nonprofit public educational foundation based in California. The Brown Foundation is dedicated to the enhancement of the public understanding of science and technology. We are part of the NEES Consortium and plan on participating in the K-14 Educational Outreach initiatives. I would be interested in further discussions with any of you and exploring collaborative education programs together.

If Congressman Brown were with us here today, he would be very humble knowing that NEES carries his name and would say, "I don't deserve it." Often referred to as a national treasure, he is missed in the Congress of this nation

George Brown wanted to make a better world. Science and the development of our knowledge base for the betterment of humanity was his passion, his quest for justice and world peace his life long guiding principle. However, he realized there could never be lasting peace without justice. He knew science and technology were important factors in developing a more enlightened society and trusted that a more enlightened society would also be a more just society. He felt it imperative for each generation to make a contribution to the knowledge base of humanity that continuum that marks the progression of mankind. A visionary, he had a view of the world far into the future and saw the interrelatedness of all things, the convergence of themes.

Congressman Brown was a scientist by training and he was well known for using science as a bridge to bring together the research community separate of political concerns to work on issues of mutual interest. Seismic research is certainly one of those universal issues affecting our planet earth.

Through the NEES Network, you will have an opportunity to build or upgrade your research facilities and gather the most current data possible. However, Mr. Brown would challenge you to go beyond that and insure that this new information be as reliable as possible and used for the benefit of society. This includes the use of NEES projects as a teaching tool for training future scientists, to establish collaborative programs in the US and abroad and to educate the public and governmental officials.