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Identity, Community, and Responsibility

by

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Good afternoon. Thank you for that kind introduction. I am delighted at the opportunity to participate in this special session, "Celebration of Women in Nuclear." I must admit that I pondered for some time on what would be an appropriate introduction for this particular topic, to this particular audience. I was reminded of a description once given of one of the original "women in nuclear," Marie Curie: "an overachiever who cooked, cleaned, discovered radium, won a couple of Nobel Prizes, and raised a Nobel Prize-winning daughter, but who never forgot how to make a good pirogi."

While humorous, that description also highlights a number of the challenges that often confront "women in nuclear," or, for that matter, women who avidly pursue a career in any non-traditional field. Preconceptions about "a woman's sphere of duties" as a wife or mother often increase the anxiety associated with choosing such a career. Expectations about the appearance, attitudes, or priorities that "should" be characteristic of a scientist often affect the degree of support and acceptance that a woman in the field receives from her peers. So today I would like to speak to you briefly not only as the Chairman of the U.S. Nuclear Regulatory Commission, but also as a former physics student, as an educator, and as a wife and mother. Several factors, I believe, are essential components in the formula for continued progress–both for individuals and for women in nuclear as a group: (1) a sense of identity; (2) a sense of community; (3) a sense of responsibility; and (4) a sense of vision.

A Sense of Identity

First, I believe it is essential for each individual to have a sense of identity. Because most women in nuclear know what it is like to "stand out in the crowd," this sense of identity might seem simple enough. However, I am referring not only to a feeling of uniqueness, but also to the need for inner motivation, for a sense of purpose, a drive to study and to work with the science itself. As you well know, few young women who decide to enter scientific or technical fields do so because of a sense that they "fit the image"–that is, that they resemble other individuals whom they have met in those fields.

Allow me to give you an example from personal experience. In 1964, I arrived as an undergraduate at the Massachusetts Institute of Technology (MIT) at the end of what was referred to as "Freedom Summer," when the Civil Rights Act of 1964 became law. In the Spring of 1968, when Dr. Martin Luther King, Jr. was assassinated, I was one of only about 10 African-Americans out of an MIT undergraduate student body of 4000 (and only a handful of Agrican-American graduate students. Those were tumultuous times– sometimes times of celebration, but all too often times of tragedy.

The obstacles I faced in those early years often were based on racial and gender bias. Initially, I was not welcomed into MIT joint study groups. But I tried to use that isolation as an opportunity to study harder, to improve my own skills, and it was not too long thereafter that some of the same individuals were recognizing my drive to excel, and even seeking me out as a study partner–which, in some cases, became the basis for enduring friendships.

What I learned from that experience is that being "under a microscope," so to speak, can have both advantages and disadvantages. On the one hand, there is the feeling of being depersonalized–that one is not seen as an individual, but only in terms of one's race or gender. On the other hand, I believe it is possible, at least sometimes, to turn that scrutiny to one's advantage. Clearly, people will remember who one is. If one's work is excellent, then one stands a good chance of being remembered for that excellence. In fact, one's achievement may be heightened, in the view of some, because one has exceeded their expectations. In this way, and in other ways, a clear sense of identity can help all of us to turn challenges into opportunities.

A Sense of Community

Secondly, I have stated that women need a sense of community. In other words, we need our own equivalent of what is sometimes referred to as the "good old boys network." Of course, I do not mean to suggest that we should practice exclusivity or favoritism–rather–that, in an environment where women are in the minority, it is vital that we understand our own demographics, and that we actively promote increased participation in fields in which women are under-represented. It is only part of human nature that we feel more comfortable in entering those segments of society where we see others like us. For that reason, it is important that we seek each other out, that we forge friendships, communication networks, small circles of support and identification. These intimate networks, in turn, give birth to larger foundations and support programs that work actively to publicize successes, to educate young people as well as the larger community, and to eradicate limiting stereotypes. More than being simply "women in nuclear"–which has a ring to it sort of like "men in tights"–women also must be real friends, offering each other support, communicating experiences and insights, and sharing a sense of community, a sense that we belong, as women, in the nuclear field.

This provides a natural segue to a point of view I shared in another meeting of women in nuclear recently in Washington, DC–which is that the most important point about women in nuclear is that they are "in nuclear." As we who are women in nuclear-related fields work to develop a sense and network of community and support, it is important to understand and to act upon the need to be totally engaged, at all levels, in this field–to leverage women's networks into partnerships with, and leadership of, all in the field. In other words, in the end, women are "people" in nuclear, and must connect with, work with, influence, and lead all people in nuclear. Nuclear energy and its associated uses and technologies are undergirding elements of economic growth and development worldwide. We all must be involved. We have no people to waste in these endeavors.

By way of encouragement, I believe we are closer to achieving this component in our formula for success–this sense of community–than we have ever been. Many studies, discussions, and actions have concentrated on formal organizational support and assistance to encourage more women to participate directly in science-based careers. Our gathering today, in fact, parallels the emphasis of the National Academy of Engineering this year on a "Celebration of Women in Engineering." I also would suggest that we are experiencing a change in employer perceptions toward diversity. Most business and governmental organizations increasingly are recognizing that, if they are to compete successfully in a global political and economic setting, they must make use of all of the best human resources available, regardless of gender, ethnicity, or other characteristics.

A Sense of Responsibility

Finally, I believe that continued progress requires that we engender a sense of responsibility. As we achieve a measure of success, it is vital that we shoulder our responsibility as leaders to set an example of vision, hard work, and ethical integrity, and to cultivate and serve as mentors to "the second-generation pioneers" coming along behind us. Being a trailblazer may be a good thing, but the high weeds will grow back rapidly if we fail to inspire and encourage others to follow.

I believe we are all aware that the struggle against inequality and discrimination in the U.S. is very far from over. For all the gains made, much work remains to be done. Few Fortune 500 companies have a woman as the CEO. European and Asian nations have elected Margaret Thatcher, Indira Gandhi, and Benazir Bhutto–whereas in our own land of opportunity, only one woman has ever even received the nomination, by a major party, for the Vice-Presidency of the United States–and that was seen as a radical step. This may change in the next electoral cycle.

A Sense of Vision

I often have been asked two sets of questions as Chairman of the NRC. First, early in my tenure as NRC Chairman, I naturally was asked, "What do you plan to do? What is your vision for the NRC? Can a regulatory agency even have a vision?" Let me just say that some issues which I had to grapple with early on led me to know that there had to be at least two drivers in doing this job. The NRC had some serious performance and regulatory issues at the Millstone station which called into question our commitment to our health and safety mission. That commitment needed reaffirmation, both publicly and internally at the NRC. In addition, there were other licensee-specific regulatory issues with which we had to grapple.

On the other hand, I knew coming in to the government that the world, for the NRC, would be changing, because of coming changes in the electric utility industry, driven by the introduction of competition at the retail electrical generation level. I knew this would drive a possible increase in license transfers, as new business entities formed. There would be a need to focus on decommissioning, and decommissioning funding assurance, and there was an increasing probability of license renewals of existing nuclear power plants. Change also would be driven by changing expectations of government agencies from the Congress and the White House with the introduction of the Government Performance and Results Act and the National Performance Review. Finally, the global focus and global collaboration on nuclear safety

matters changed and increased in the aftermath of the Chornobyl accident and the breakup of the Soviet Union. All of these issues meant that the NRC needed to be ready for change.

Here, then, I had two key elements of a vision for the NRC: first, reaffirming our fundamental health and safety mission, and second, positioning the NRC for change. What had to connect these was a continuing improvement effort to enhance our own effectiveness as regulators. Therein lies my three-element operational vision for the NRC.

Now today, people ask: "What have you done? Have you achieved your vision? What is your legacy?" I generally feel that the question of legacy is best left to others, but let me tell you some of what I believe I have managed to accomplish, with the help of my personal staff, the Commission, and the NRC staff as a group. I will mention very briefly six things.

First, we carried out a Strategic Assessment and Rebaselining of all of NRC activities and programs, leading to a new Planning, Budgeting, and Performance Management (PBPM) Process. We plan better, we are more business-like, we are outcomes-oriented, and stakeholder involvement is second-nature to us. This multi-year effort has provided the basis for achieving all elements of the vision, because it addresses what is essential to mission, how to improve how we work, and where we go from here.

Second, I have introduced risk-informed, performance-based regulation as an overarching concept and methodology for carrying out our work. Because it provides for enhanced safety focus, through the use of risk insights and risk assessments, together with our traditional approaches, it by definition gives a reaffirmation of our safety mission. In addition, it allows a prioritization of our activities that enhances our effectiveness.

Third, we are beginning the implementation of a new reactor oversight process, starting with a pilot program that is beginning as we speak. The elements of the new process are clearly tied to cornerstones of safety. It is performance-based through the use of performance indicators, and it is risk-informed through the implementation of a risk-informed baseline inspection program–as well as in the categorization and validation of performance indicator results.

Fourth, we have established a license renewal process that is fair, focused, well-planned, and predictable. As a consequence, we are anticipating an increase in the number of license renewal applications above our original expectations.

Fifth, I spearheaded the formation of the International Nuclear Regulators Association (INRA), comprised of the heads of the national regulatory bodies of Canada, France, Germany, Japan, Spain, Sweden, the United Kingdom, and the United States. It provides a forum for high-level policy discussions for these most senior nuclear officials, in an atmosphere of candor and collaboration.

Sixth, I have been able to bring about a reorganization of major NRC functions and offices, and the development of and emplacement of a new generation of leaders. This leaves the NRC refocused, energized, fair, and independent–in other words, well-poised for the future.

I am proud, without being prideful, of what I have been able to accomplish as a “woman in nuclear”–not without controversy, pressure, criticism, or attack–but I have persevered and grown, and I have come out better, personally and as a leader, for it.

That said, “women in nuclear” are a resilient bunch, and given my experience of the past four years as Chairman of the NRC, I am confident that our numbers and our prominence will continue to grow, as we continue to build our sense of identity, our sense of community, our sense of responsibility, and our sense of vision. I also am excited about the opportunity afforded by our discussion today. In closing, let me return to Marie Curie–this time for a piece of advice that she left for us all: “Life,” she said, “is not easy for any of us. But what of that? We must have perseverance and above all confidence in ourselves. We must believe that we are gifted for something and that this thing must be attained.”