

The Insider's View:

A photograph of Jan Carlin and Larry Stickney standing on their farm. Jan is on the right, wearing a white turtleneck and sunglasses. Larry is on the left, wearing a white shirt with a camouflage pattern on the sleeve and a baseball cap. They are both smiling. In the background, there are rolling green hills and a red tractor. A lanyard with a badge is visible around Larry's neck.

Jan Carlin; passionate environmentalist & nuclear advocate

Jan Carlin and her husband Larry Stickney at home in the Laurel Valley of Western Pennsylvania, on their farm that feeds wildlife, bees, butterflies and provides organic food. Larry is a nationally certified wildlife manager and expert in indigenous plants, bee habitat and deer stewardship.

Having worked for nearly 40 years in the US and international nuclear industry, Jan Carlin has been a committed advocate for nuclear energy since the 1970s. She has been closely involved with many of the landmark projects that define the industry today including Three Mile Island and Yucca Mountain. From commercial nuclear energy to weapons programs to legacy cleanups, Jan has chosen to remain on the frontline. Soon after the Three Mile Island accident in 1979, Westinghouse “loaned” Jan to General Public Utilities to provide expertise during contentious public meetings over the venting of radiation from damaged buildings. One of her distinct memories from that time was sitting in the front dais at the Middletown Fire Hall waiting for the meeting to begin and suddenly voices raising, people moving quickly and then being whisked away by State Police as a bomb threat had been phoned in; she was taken by police escort to an undisclosed location. There were other moments in far West Texas when working for a client to site a low level radioactive waste facility when her life was threatened and she required a body guard 24/7. Frightening times, for sure; but educational, exhilarating and life forming. Describing herself as a “practicing environmentalist”, today she is heading a project to promote nuclear energy to the US public: “nuclear energy is so essential to our future; our message has to be heard!”

By Joanne McIntyre



Westinghouse – The beginning

Jan joined the nuclear industry at the height of US oil embargo in 1974. “It was a dramatic time in the US and when I graduated from Purdue there were simply no jobs in the construction and building arenas. On the recommendation of a college roommate from Pittsburgh, I applied for a job at Westinghouse who offered me a position in the Nuclear Fuel Division,” begins Jan.

At the time, Westinghouse had an in-house program which taught non-nuclear engineers the intricacies of a pressurized water reactor. “It was an education I could not have paid for; taught by the preeminent nuclear physicists in the world. Westinghouse had the best of the best, a lot of nuclear Navy with hands-on experience and the best physicists and engineers of every discipline. If you didn’t know it, someone down the hall did and over lunch, some of the most difficult equations in NSSS history were debated and solved. It was a classroom like no other. You look across the nuclear complex today and there are so many, what we fondly call ourselves, ‘old Westinghouse’. What a privilege to



Jan is treated to a demonstration of her client’s robotic arm, equipped with high rad camera as her picture is taken through the 18 inch leaded glass of a hot cell.

have had the opportunity to work with the very best.”

“After a couple of years I heard about the Westinghouse Campus America Program and was intrigued...”

Campus America Program

“What an exciting time that was! In the mid-1970s there was a lot of controversy in the US about the place of nuclear power in the energy mix,” Jan explains.

“Westinghouse’s Campus America was a team of 10-12 engineers who travelled to university campuses all over the country to answer people’s questions about nuclear energy and debate with top anti-nuclear protestors, including celebrities such as Jane Fonda, Ralph Nader, Amory Lovins and Tom Hayden. At first, it was incredibly daunting – I wasn’t a nuclear engineer! While the training was at first excruciating, being trained to debate is

Advocating nuclear energy



Jan and Rick Morris review their proposal to launch a national speakers bureau aimed at mobilizing women in the industry and jump starting the US debate on nuclear power.

Jan’s latest project is working with Rick Morris – her original mentor for the Campus America program – to develop a program geared towards putting together a cadre of women speakers to address nuclear issues. The women in nuclear energy “Voice of Reason Program” will tackle head on the tremendous opportunity that exists because of a huge public opinion gender gap. A March 2012 US survey revealed 72% of men think nuclear energy is safe and only 43% of women. “The nuclear industry cannot ignore this gender gap. Women are becoming increasingly involved in all levels of politics and government and it’s really women who are influencing decisions, whose votes will get a specific politician in office,” Jan explains. “Our program brings together a group of women to really push our message to mainstream national media like CNN, Fox News, the Oprah show, etc. Women should be talking about the availability of electricity and how that affects the economy, jobs, and their futures.”

Rick Morris, President of Smith & Harroff, Inc., has decades of experience managing national speakers bureaus for a variety of industries and got his start in the 1970s with the Westinghouse Campus America program. Years later his firm still manages the

Clean Energy America program, www.cleanenergy4america.org, selecting and training speakers and scheduling statewide tours around the country. “We want to bring our collective experience, combine it with talented women in the industry, and together address the gender gap issue.”



an interesting process; most people's first instinct is to open their mouth and talk, but we were taught to listen carefully, look for our opening, form an argument and deliver it in short, verbally graphic, and easy to understand language."

Jan made many TV and radio appearances on behalf of Westinghouse and Utility clients to defend the nuclear industry and debate environmental issues with radical environmental groups like Greenpeace and Union of Concerned Scientists. It was a confrontational and demanding role but Jan thrived on it.

"That's been a theme throughout my life; in every job I have chosen to be on the front line. Whether it was siting a facility or interfacing with regulators, I have



The Hanford 'tank farm' during construction in the 1940s, and an interior view of the waste needing clean-up today. The chemical mixture in tank depends on how the waste was generated and later waste management practices such as liquid evaporation, radionuclide removal, and waste mixing between tanks. Photos: US DOE and Pacific Northwest National Laboratory.



Jan leads a handsome foursome during a fundraiser for the high school golf team.

always wanted to be at the forefront. My motivation is a combination of enjoying the challenge and being passionate about nuclear energy. I've worked for 38 years in this business and am absolutely committed to nuclear energy. I live in coal country and see the impact of coal mining every day, and the nearby mountain range is covered with windmills in every direction. I see the need for a broad base energy mix and nuclear has to be a part of it."

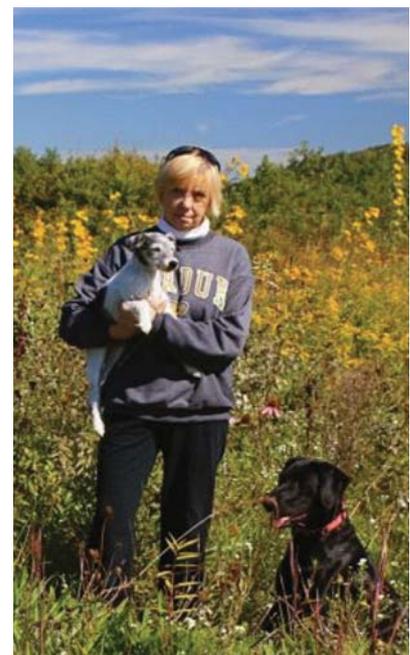
"One thing I learned from Campus America is you have to continuously communicate in order to get your message heard. The industry must accelerate and improve communications on the issues on a regular basis and seek out platforms and opportunities to get our point of view across. Right now I don't hear enough about it and that frightens me" (see box 'Advocating nuclear energy').

Hanford & Sellafield – "We really need to do better, much better"

From 1987 Jan played a key role again with Westinghouse as a full time consultant in developing the original Westinghouse proposal to clean up the highly contaminated Hanford site. When Westinghouse Hanford Company won the work, Jan was asked to move to Richland, WA to help with the transition. She stayed five years.

"Hanford is a Department of Energy (DOE) site and my work was an interesting combination of dealing with a lot of regulators, from State bodies to the Environmental Protection Agency. It was a strong contrast to the commercial nuclear world and it was difficult in

a different way. I had to deal with opposition groups who were not against the cleanup but wanted it to happen in a way that wasn't financially possible. I walked a tight rope between the demands of the public, the requirements of the regulator, and the reality of trying to clean up a very messy environment. Coming from a commercial nuclear background where the plants are so clean you can practically eat off the floor it's a shock to see sites



Jan and two of her dogs on the farm.





Dave Pethick, long-time friend and advisor gives Jan his thoughts on her new program.

However, the difficult work remains to be done; and this is where we need better action and forward movement.”
 “My first-hand observation after living and working at both Hanford and Sellafield is that the systems are flawed. Both the DOE and the NDA have had the absolute best people and technology at their disposal for many years. People with track records, demonstrated environmental champions; and their hands have been tied. Real environmental problems are at hand and yet we study and procrastinate some more. We cannot keep kicking this down the road.”

like Hanford or Sellafield in the UK which are hazardous, complex situations that require an incredible amount of technology and understanding by all parties to accomplish the cleanup.”
 “The big revelation for me was the acceptance of an incredibly slow pace of progress in the face of truly dangerous environmental condition at these sites. Whether its Sellafield, or Savannah River, or Hanford, we must clean these facilities up. It is no longer acceptable to simply delay and blame budget restraints. If we are serious about advocating nuclear energy, governments around the world need to clean up these facilities, now.”
 “Much work has been done and the regulators are to be commended.



An anti-nuclear rally in Harrisburg, USA in 1970s. Jan travelled the country answering people’s questions about nuclear energy and debating with protestors.



On a recent trip to Aiken, Jan is greeted by URS colleagues.

Rainmaker Environmental

After her time at Hanford, Jan and two former Westinghouse colleagues founded Rainmaker Environmental Options Consultants and Engineers.
 “I wanted to work on bigger projects and in the mid-1980s licenses were being granted for low level and trans-uranic waste facilities. It was a very successful business and we worked on some interesting projects. As well as nuclear projects, we worked on hazardous waste facilities, land fill expansions, and a 500 MW power line transmissions siting project. I learned that while explaining



radiation to people is difficult, it's much more difficult to sit at someone's kitchen table and tell them that having a 500 MW line 400 feet from their house won't affect their lives."

Challenging workplace for women

"It was difficult working as an engineer in the 70's in a very male dominated industry, but it changed my life. I was able to do so many interesting things and work with so many exceptional people like Lloyd Andrews, founder of Chem-Nuclear, and Pres Rahe one of my first bosses at Westinghouse and retired President of URS Energy & Environment."

"Sometimes it was tough being a woman on the front line: in 1975 there were 3 women in the entire Westinghouse division compared to 8,000 men! After 18 months I worked my way up to Project Engineering, a position never held by a woman before. On the flip side there were lots of opportunities; the US government encouraged companies like Westinghouse to employ women and there were actually

quotas for women in management positions. Truthfully, it was that policy that made me decide to start my own business: I wanted to be a worker rather than a manager."

"I enjoyed facing the challenge of 'can I make that happen?', and over the years the answer has been 'yes'. We have faced many political challenges and being a part of winning referendums and keeping

the benefits of nuclear energy viable is important to me."

"I've always worked hard and made sure that what I did was more than acceptable. A tip to young women coming up; learn to play a good game of golf; when 'the guys' went off for a game I made sure I was with them! It's a different world today and I often wonder if women really understand what it was like back then."

Nuclear vs gas

"Using oil or gas to boil water to make electricity simply doesn't make sense," says Jan. "Nuclear is the only baseload option that does not contribute to greenhouse gases; that alone is incredibly important to this discussion. Oil and gas are critical for transportation, heating and as a feedstock for manufacturing, and we have nuclear power available. In the US older plants like Kewaunee which can't compete with the current low gas prices are being shut down; how short sighted! Given the amount of shale gas being discovered in the US this is only going to get worse. It's a great resource, but don't shut down our base load nuclear plants because we will have cheap gas for a short while. We need a diverse mix of baseload power like nuclear, alternative sources like solar and wind where geographically viable and conservation. Nuclear energy is important for our future, for local economies, and for the national economy. This is so important for our future and yet it's not being addressed right now. "