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## **Bob Croteau Memoir**

### **Croteau, Bob**

Interview and memoir

Digital Audio File, 76 min., 18 pp.

UIS Alumni Sage Society

Croteau, Renewable Energy Conservation Manager for Springfield's City, Water, Light, and Power (CWLP) discusses classes taken at Sangamon State University on renewable energy in pursuing his environmental studies degree. Croteau participated in the building of the geodesic dome with solar panels in a class taught by Prof. Alex Casella. He was involved in energy conservation projects with the Springfield Housing Authority, the creation of Students Allied for a Greener Society, and building a solar "Florida" room for the local Senior Citizens Center.

Interview by Emily Martin, 2009

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Narrator: Bob Croteau  
Place: Springfield, IL  
Date: May 6, 2009  
Interviewer: Emily Martin

Q: This is an oral history interview with Bob Croteau on Wednesday May 6, 2009. The interviewer is Emily Martin.

(Tape stops)

Q: This is an oral history with Bob Croteau on May 6, 2009. The interviewer is Emily Martin. Bob, what years did you attend Sangamon State University?

A: I first came down to Sangamon State to visit in 1975. My sister, Susanne Croteau, was attending here; she was in the Justice and Social Order program. And she told me about this innovative school that had solar energy classes and I had a passion for renewable energy. I was concerned about the proliferation of nuclear power at the time and I wanted to see what alternatives there were.

And so I came on down to visit and was able to sit through a class of Alex Casella's, and these students were building a geodesic dome and solar panels to heat it and I thought, "This is really the type of thing I want to be able to do." I want to be able to actually, rather than such an academic discussion, I wanted to actually see something that you know, actually build something that could be useful in making this transition to an environmentally-friendly energy reality.

I had been, I had a previous profession as a – working in chemistry at Miles Laboratories in Elkhart, Indiana; they made One-A-Day vitamins and Alka-Seltzer. But I didn't really feel fulfilled in that way. I really kind of thought if people were taking better care of themselves they wouldn't need the Alka-Seltzer [laughter] and if they were eating right they wouldn't need the One-A-Day vitamins. And so I was kind of in a state of needing to have more relevance in my life.

So upon my visit down here I did get to meet up with a whole community of people who were looking at education as a world-changing perspective. It was doing something not just to go out and get a job. But it was, what are the problems in our culture and what sort of real world remedies might there be?

So I was very pleased to find there was a wide variety – actually when I came down to visit I spent the week just going from class to class. Bill Warren had classes on urban planning and Jon Munkers had class on the power-base, the economic power-base and Malcolm Levin was – I sat in on classes on agro-ecosystems. Actually took that class later on because I was concerned about, what are they doing with the land. And even Charlie Schweighauser's classes, he was a –

although I enjoyed some of his astronomy classes as well as and was a minor astronomer myself, he was working on the Sangamon Valley Sense of Place Project, which really brought to mind ecosystems rather than just maybe a little line on a map that you can build a town along or channel it or something. It really said there's more to that, that there is life forms beyond just our human experience here that are very important in our sustainability as a species.

So there were many professors at the time – Luther Skelton, I really enjoyed his perspective in looking at what's beyond the economy of carbon, where our fuel source basically had been carbon-based, either coal or natural gas, oil. And he wrote a book about solar energy, *Beyond the Age of Fire*, and looked at hydrogen as the new, *Solar-Hydrogen Energy Economy* I believe is the name of his book. And looking at the world from a prospective of, you could use solar electric panels to separate water into hydrogen and oxygen and recombine it in a fuel cell, you could store the hydrogen in hydrides and then to recover it at night. Then when you recombine it your byproduct is water again which you then can just convert back into hydrogen and oxygen. So you didn't have this pollution cycle where you're generating carbon-dioxide, which is creating global warming issues.

At the time we were studying this it was – the carbon was a concern but mainly we were dealing with sulfur-dioxide which was creating acid rain which was poisoning our lakes and forests and the mercury and various other things that were happening that we were working at containing. But now all of a sudden you had a byproduct that was totally benign and you're just running on the energy of the sun.

And it didn't require mining, tearing up the land to get to coal or the political issues of Middle Eastern oil and having to have infrastructure where you protected that, you know, the military base that was protecting those energy reserves. There was so much energy falling on the earth just through the solar that you really don't need to be undermining other third-world countries for their energy resources.

So this was very refreshing to me to see not just a little fix and everything that I had experienced in my earlier education was – didn't take these things seriously. I mean, there was well, maybe we can make things a little more efficient this way or that way or little band-aid fixes. But it didn't look at a whole, bottoms-up perspective that would be able to be sustainable.

And really the word "sustainability" was something that wasn't quite in my vocabulary until I got to Springfield and realized that that's exactly what we need to do. We need to develop things that are sustainable well into the future for our children's children's children and for the seventh generation as the native cultures would address.

Q: So would it be safe to say that your experiences at SSU have shaped you, helped to shape you into who you are today professionally and personally?

A: Absolutely. I am, when I started off, I always enjoyed the science and I kind of abandoned my chemistry career and wanted to take things in my own hands. And so when I moved down here I was able to move out to an old drafty farmhouse and found out that the first winter was a real eye-opener. The wind blows strong on these open plains and so I was learning to make weather stripping from old carpet remnants and lathe strip and stuffing paper into cracks around windows and doors.

I was experimenting with solar and wind at the time – I was building little modest solar collectors that could heat but you needed to do something at night, too. I was working with wind projects - I had an old Corvair generator and a fan blade from a window fan that I was attempting to do you know, store some wind energy, which is quite comical as a toy kit compared to what they are actually doing nowadays.

But I was experimenting; I was actually able to tinker with this and I definitely recognized that that energy efficiency, energy conservation was the bottom line. We have to conserve what we have first. It is much more economical to do that and then at some point especially as a transition to a new energy future you have to figure out how to save the energy we have through tightening our buildings, caulking, weather stripping.

I did find an old wood stove and that saved me when the modest propane furnace couldn't handle the load [laughter] and broke on me. And so I was cutting firewood and dealing with some of the – six of the ten worst winters in this – recorded weather history, since the late 1880s. And that one decade that I was dealing with, it was quite a challenge. But I learned how to actually make things or identify where the leaks were coming in at – what were the inefficiencies of our building stock?

And I of course, those were the affordable places to rent and so I always found some of the worst places to rent and then I would fix them up. And in one way it was nice because I could for very little money, make them livable whereas most people would just walk away from them. So I always managed to get inexpensive rent and would fix places up and leave them behind me better than I got them – which was OK with the landlords.

Then one class that Alex was teaching was called Community Energy Systems and the class decided that this was just too good a thing to let die after a class and so they incorporated as a not-for-profit and began this organization to gain grants, write grants and, do solar demonstrations and energy conservation projects.

So I was hired in as their technical person, John Williams was our public relations person, and Stuart Kainste was our business manager; so the three of us went boldly forward getting grants and doing projects. We, I had designed a hot-air solar collector that could be built in a weekend and installed say, the next weekend from just materials that you could just get locally. We went to the old *State-Journal Register* Building and got aluminum off-set printing plates.

It was impressive walking in and looking down into the bowels of this building and seeing the big presses running and it was like, *Superman* series thing, looking at the *Daily Planet*, almost. But they let us have those printing plates for free and we bent them with two-by-fours and put them in an insulated box and got some glazing we were able to put over it and we got a grant to install them on five Springfield Housing Authority homes, low-income homes. They were able to do all the daytime heating from just a four foot by eight foot panel or multiples of that – two panels together sometimes.

And so we got a lot of publicity. We had a press release – there was a fourteen degree, the outside temperature was sunny but the wind was blowing in and this one four foot by eight foot collector was – no I think it was a two, it was a eight by eight collector – was heating the whole home, Wilma Brewster's home. She was the Johnson Park Tenant's Rights Council president and so we – I still have news clippings from that period.

Another thing we did was I designed a passive solar greenhouse that we were able to build for a five thousand dollar grant from the Department of Energy and Natural Resources. At the time I think that maybe they were the Illinois Institute of Natural Resources – INR. But we had volunteers, we had donations from the local trades and we built it into there in Douglas Park the Senior Citizens Center had on the south end of it just a wall that was just a bare wall and it was so cold that people would move their desks away from it in the wintertime from the inside.

Once we built a solar greenhouse then that became the thermal mass wall then they were kind of fighting for the opportunity to have their desks up against that wall because it was so warm. We also had a very cold period by Christmas where it was ninety-nine below wind-chill and the greenhouse only got down to thirty-eight degrees inside there. There was no back-up heat in there at all just the earth berming and the solar stored heat.

So it was there for a good twenty-five years or so until most recently they had to expand the building and they had to tear it off unfortunately – I was sad to see it go. But it served them well the tenants or the people who frequented the senior citizen center, they called it their "Florida room." They were able to grow vegetables, salad greens for their kitchen and their food on wheels program. And it gave a nice focus for people, if you had arthritis you could go out there and really warm up the joints so it was very well received.

So and I did a number of projects with them, I did low-cost workshops in five various counties with the Carlinville's community action agency, Illinois Valley Economic Development Corporation, I believe. And I did low cost weatherization workshops which I brought with me to – the concept – to City, Water, Light, and Power here, we're doing that now. I did solar demonstration projects; we built low-cost solar collectors in East St. Louis. Representative Wyvetter Younge got us some money to sponsor this – building them and then the local residents installed them on various homes there.

And so at one point we hired city youth to build solar collectors and solar room additions and sun spaces. We went through a classroom phase where I taught them energy conservation

theory and features and then we had a shop phase where they learned how to make these things and then an on-job training phase where we actually hired them and we had a business where we were then insulating homes, weather-stripping them, upgrading their general weather-worthiness. And then once they were efficient enough then we would actually go and put solar collectors on them or build sun spaces and the like.

And we did that for about four years and a number of the students were actually able to get jobs as a – we had a couple that became union carpenters and the like. That group faded away to some degree and I got my own business that I was installing, selling and installing manufactured solar collectors. And right about that time the utility – the Energy Conservation Office approached me and offered me a job as an energy auditor. So that was in the fall, I think February of 1984. And so I've worked there since, I've just celebrated my twenty-fifth anniversary.

So my experiences at Sangamon State and what grew out of that brought me and gave me the credentials really to come to this job. I continue to grow here as well. And another project – I want to go back to Sangamon State – that Alex Casella developed, he got a grant from the National Science Foundation to look at the energy inputs and outflows of this city of Springfield and its extended city, into its surrounding communities.

Looking at the local perspective of what are the energy inputs into and out of the city from transportation, though food production, electrical production, natural gas. And there were a number of sub-groups that various University professors would head up – Malcolm Levin did the local food production. Good friends of mine were in that group; I still have the regional report that came out and a wide base of community leaders, architects, politicians, waste utilization, emergency energy, emergency contingency planning, local food production, institutional usage, public awareness, transportation, government, economic development and employment, and residential task forces.

And it's pretty much a who's who and it was amazing that he was able to get this many people in the professional community involved in this project. And it recognized that if you are using energy – wasting energy, a lot more dollars flow out of the community that might go to investors elsewhere and utility or foreign oil to run your cars. So if we could make things more efficient number one, we could keep more dollars in Springfield, it would increase the efficiency of the city itself, the economic viability of the city and it applauded things that the utility itself was doing and recommended other measures that the energy office could implement.

And as we went along, I guess, I went back to Sangamon State for continuing education opportunities and although at this point I didn't really have an energy degree, I went back and decided to – I had taken a number of energy conservation courses and social change was one of them. I took from... Mark Hyman was another very informative professor; he was a student of Frank Lloyd Wright and he taught solar architecture and it was out of his class, actually, that I designed the solar green house for the senior citizens' center.

And so, I took a variety of these classes – I think I took three from him – and to where I finally decided I should get a degree out of all this. And so I got serious and applied for the environmental... master's in environmental studies with an energy emphasis. And so I would have to say it began in the late 80's and ended with actually a degree in 1990 – I'm sorry, I mean 2001. I don't know if I was the longest running student there before I finally got a degree. But I really enjoyed the classes and, you know.

Q: So you started in 1975?

A: Five, taking classes.

Q: Taking classes just here and there, for your own learning.

A: Yes.

Q: And you ended with a degree in 2001.

A: A quarter century later [laughter] I finally decided to go and get the degree. And it probably could have happened sooner but I really – my master's project was a photovoltaic power plant for City Water Light and Power. And I could have taken a short cut and gotten an easy degree, done maybe a forty page master's project, but I really wanted it to be taken seriously. And at the time CWLP was looking at building a new twin gas-peaking generator, a 118 megawatt natural gas generator that would be a twin of the one they already had.

And I said, "Well, what if we look at and build a 118 megawatt photovoltaic plant." And nothing had been built that large on the whole planet. I mean we now, at this point have maybe five and eight megawatt power plants around but nothing of this size. But I said, "Well, let's look at the viability." And using utility planning software that they used for designing any power plant, I was able to show that it was economically viable over a twenty year period to built a photovoltaic field – you could build this on three-fourths of an acre – I'm sorry, of a square mile.

Three-fourths of a square mile, you could have sort of a photovoltaic farm that would provide all this power. And its daytime power, it would be used when everyone else is using power. So it would automatically be used as we need it and especially summer peaking, utilities always need power in the afternoon so these would be tracking the sun throughout the day and would be looking at the sun during peak period. The outflow of that is ultimately that it was a hundred and forty page master's paper and it took years. However I do have to say that I wrote it using a solar panel driving a laptop computer.

Q: [Laughter]

A: So it was all written with solar power.

Q: The true spirit of it.

A: As a purist, uh-huh. The ultimate outcome was that they actually built this new 200 megawatt coal fired power plant which, it makes sense – we need a transition technology and, we had to retire some very dirty old power plants that were very inefficient and polluting, so that was a good thing.

The energy industry has changed so much, not only could we have this built, I would argue we could build that 118 megawatt plant that could continue to grow as we grow, as the population grows, and our energy demand grows. You could just build this in increments, in wouldn't have to be one big power plant all at once. You could build it, maybe 5 megawatts per year or 10 megawatts per year and this would allow you to match your growth as you needed it.

Luther Skelton had a wonderful project, which I had been trying to get them interested in doing was to go ahead and purchase a manufacturing production line to make solar panels and have it in Springfield here and have the output of that plant produce all the solar cells that you would use to just install here. And you could install them on rooftops, city buildings, canopies over parking lots that would benefit the city and the public could buy them if they wanted to. We could put them on their roofs if they couldn't buy them, but we could so to speak, lease the space and they would have the benefit of that nice clean, green, environmental-friendly solar power.

Q: I like that idea. Going back to your graduate thesis project, and it sort of harkens to what I think a lot of SSU alums say and I think you mentioned at the beginning of this interview – that you weren't going in it just for the paper, you weren't going in it just for the degree.

It was more of an enriching experience to purposefully, how to live life and learning. Would you say that by going the extra mile and doing what you really wanted to do instead of taking shortcuts in that phase of your life, has that carried on as you continue to grow professionally?

A: I really think it did. I think that the experiential learning element of Sangamon State, which was part of its early mandate is something that has allowed me to grow academically, professionally. I had attended Northern Illinois University before and I had, you know, classes of hundreds of students and it didn't really offer the opportunity to really get into the core of the subject.

The classes at Sangamon State of you know, fifteen to twenty-five, were wonderful because I could pursue a question with the teacher, the professor and not have to – at a big University you're taking to a TA who may have the time to give you, you know, divided among thirty other students who are needing attention. You really had the opportunity to get into it and usually you'd be given the response, "That's a very interesting question. Why don't you research that a little more and get back to me on it."

Q: [Laughter]

A: But it was a very engaging, very open, relaxed university environment which I definitely blossomed under compared to the – I would have to say I struggled underneath the traditional environment of university. And I would say the smaller size but the fact that the professors took more of a personal interest in this as a profession and not just a job was a very valuable thing.

I think I can relate this in a way – my children are now in the Montessori Children's House on Sandhill Road. And some of the things I did when I first came down here was I started reading all of these alternative books. And one of them was Montessori, Marie Montessori and the Montessori education process. Where you – people learn in different ways. And to sit in front of a classroom with this chalkboard in the front where you're just doing reading and something off of a board – maybe it works for certain students and they get As and they go on.

But I really believe that everybody can be taught if they're tapped into the way they learn. And the Montessori method does this where you learn through sight, sound, touch, you feel objects, you look at math and you build blocks and you have learning aids that you visually are able to see how this stuff happens – you're not just trying to memorize a multiplication chart. You actually see – you work with beads and you build beads and see how ten beads in a two-dimensional way and then in a cubic way, a three-dimensional way.

And Sangamon State was a way that it afforded you to be able to go beyond, just stand up in front of a large lecture hall and hopefully you get it and if you don't, you're out of luck because there's not enough time to address these things. And so I really hope that with the new evolution of Sangamon State into the University of Illinois at Springfield, I hope that it can retain a lot of those qualities of that experiential learning.

The, that it doesn't become an oversized university that just becomes what all the others are. I think it had a unique and valuable mandate that allowed me definitely to bloom. It tapped into my abilities to learn and grow and I hope for others like myself, it can retain those qualities – where the class sizes doesn't get too big – and, but that it looks at what does the culture need? Rather than just crank out another accountant – what is, how is society working?

Let's explore the edges of it, the urban planning. Why instead of just, let's build another interstate here, maybe you don't need an interstate. Maybe you can design a community around not needing to just wipe out whole neighborhoods building an interstate through a city, maybe you create a planned community that will be environmentally friendly, won't rely on everyone having to have a car to get around – and if they do they don't have to drive it a lot.

And it's those sort of things of – “thinking outside the box” is really cliché but I mean, it really is thinking outside of the traditional educational patterns that I think was Sangamon State's strongest asset. And even if things seemed crazy, I remember going in from more of a

traditional perspective and finding out I was asking the wrong questions, you know. What I really needed to do was sit back and listen to what the reality of this was.

I think maybe one of the more formative classes I had was Environmental Ethics. And it was – I think Ed Haas and Luther Skelton taught the class and I apologize if I have the names wrong, but they were all valuable professors for me. But I went in with a technological fix mentality – let's get in and we'll make this thing and the solar energy will solve the world's problems. And not if it just means you're wasting energy and continuing to you know – but what do you need it for, how do you fix the environmental issue?

And the message that came back was, well let's look at the literature and find out what the great thinkers have thought and you know, the commons, the loss of the commons. What have we lost in our march to progress in devouring the planets, this native land? And just the basic Christian myth that – and I was raised Catholic – and I felt that there were issues that didn't make sense, that we weren't treating the Earth in a positive way.

And that if the Earth was not heaven and heaven was somewhere else, then you didn't really need to view the Earth as something worth saving. And this was blatantly said by other – James Watt who was Reagan's Department of Interior Secretary, actually blatantly said that. You know, the Earth at the second coming, the Earth is all going to be made new again so why do we have to worry about it? These were the type of people that were running the country [laughter] who to me, I couldn't believe that we had such a way to go, in a way.

So but looking at new ways of creating new myths about what is the Earth and that there have been positive strings in consciousness that just needed to be brought forth. And so a more Earth-centered myth, that if you will, God is in the Earth. And to me, I recognize that as I got out into nature, I recognized it is alive – there is something alive here. And you don't get that from a classroom, you know, in an inner-city. You have to get out into it to see that and our classes brought us out into nature.

Q: You were prompted to go out into it.

A: Yes, that was part of our classes was to go out there and experience nature. Go out to Carpenter Park and the UIS nature preserve areas and prairies and that sort of thing. So I hope it fosters that and continues recognizing that it needs to feed the students with that life force that will answer a lot of questions for them. It will give them a sense of direction, especially if you have city kids coming in, they need to get out there.

The Clayville Rural Life Center was a wonderful experience where it celebrated the rural environment – the old Clayville Stage Coach Stop just close to Pleasant Plains here – brought in local musicians, local crafts, the weaving, the crafts that you could use to have – which I would say the Amish Communities recognized the value of the environmental sustainability of those kinds of practices that you didn't have to get something from the factory.

You could make it and preserve a valuable culture, utilizing and having access to those sorts of things, tools that you know, make and sell, making a broom out of broom straw, you know, making tin items, pottery, wheat quilting – all these sorts of things were just wonderful, experiences to see, “OK, we can be empowered to make our own.” And it’s so much nicer to give somebody a gift that has been made by yourself then to be something from a corporate giant, maybe made by a third-world person [laughter] in a dire position. But preserving the life and the land of the culture here I think has something, a place that Sangamon State – UIS can continue to do.

Q: Something a little more unconventional that I know UIS has not opted to continue would be having classes downtown or in sometimes in bars or at a music venue or something like that. Can you describe for me any memory of a class maybe downtown or in an unconventional place that you might not normally have a class?

A: Well one is the exposure to music. One of the early things in the early days, Sangamon State radio – WSSR – was formed early on. You know, Harvey Koplo, Doug Kamholtz, Bill Renz – this is where you actually had a DJ on the other side, a live broadcasting these things. They would bring in folk musicians from around who were celebrating this indigenous culture.

We had the Rudolph’s Bean Coffee House that was downtown here and it was an old storefront behind, to the west of First Presbyterian Church downtown on Capitol – brought wonderful folk musicians and poets and the like to Springfield. Allowed them a job basically that helped them, you know, make a living as well. But wonderful artists – Claudia Smith I know is – Utah Phillips, I could go on and on I’m sure and I apologize to all those wonderful musicians and artists that I’m not talking about.

But that was such a valuable cultural experience that was brought to Springfield by some of these. And so you would, it was basically part of your homework assignment or as a class you would go and attend something like this. I had music of the black and white subcultures, and I can’t even remember what the title was. And it brought so much of that – to be real, and I mean to understand it made so much more fuller an individual of... for me to experience those things, you know, not just hear something – a recording or something but maybe actually go in and experience that kind of music in the venue.

Classes – there were a couple of downtown campuses, at the Leland Building, the old Leland Hotel building. And I can barely remember some of the names of the classes but a lot of social consciousness classes were held here. And there was another downtown campus, it was on Fourth Street across from the post office, I had classes from Bill Martz there – Environmental Chemistry.

Q: How did you have a chemistry class downtown? I mean, did they have a lab and everything?

A: No, there wasn’t a lab there. But it was, we learned – in one way there was a lot of policy. You had to learn what were the laws of the land at the time dealing with environmental issues.

And I'm amazed now that as I keep talking, I hope I haven't been talking to long but I have taken so many classes over so many years [laughter] that it's kind of funny. And something would come up and be relevant at the time, I would see it in the catalog and I would, "Wow, I need to know about that."

And you can read enough but it's great being able to have a class where not only, they would have a professor who could do it or maybe they might pull somebody as an adjunct who would be – the one class I had was on solid waste management and that was taught by the director of the Energy and Natural Resources Office of Solid Waste. And so you got the cutting edge information and so you knew you were very current on the information you got.

Being in Springfield I think has been an advantage too, because you have the state offices and the state policy things that are happening, you're closer to the action so you can know better what's going on. Dick Johnston had classes at the Leland Building and I was, I don't remember the name of the classes but I initially sat in with my sister Susanne, that was one of the visits that – a class she was taking in justice and the social order probably, and women's studies and the like, that Mary Johnston is a wonderful photographer – they both came back to Springfield, UIS, recently for kind of a reunion a couple of years ago, I think in 2007.

Had a lot of their old pictures when they lived in France back in the 50's and wonderful photos that just captured the culture, so there are many professors and I apologize to all of those that I – if I rambled on for three more hours I would probably bring all their names to the front.

Q: [Laughter] So that brings us then – can you think of any other students or professors that you keep in contact with regularly, do you think?

A: I do keep in touch with a lot of students. We had, a the group of us started the SAGE – Students Allied for a Greener Earth, and I know [laughter] they've used that acronym for the, now for the group, but we are... Renee Robinson, Bob Raebig – and he was Mr. Recycling in it – Jennifer... I'm sorry I can't remember her name now. Boy and I should have written down names before I started this one. But Charlene Falco – many of these people are involved, they're in state government or in local groups. I know Charlene is working with Friends of Sangamon Valley and has been adding a lot of time to helping preserve the environment.

(Tape Stops)

A: OK, so Jenny Skufka, Renee Robinson, Bob Raebig, and I, we went down to a national student environmental conference in Chapel Hill, North Carolina. Alex Casella managed to get us a van; got to rent it and the four of us went on down there as one of our first official acts of the SAGE. And that was to seek student environmental coordinating [laughter, inaudible].

And they had, the first one was in Chapel Hill, the second one was I believe in Boulder, Colorado at the University of Colorado, and then the next year was at the University of Illinois, Champaign. Ralph Nader was the keynote speaker at that one and Winona LaDuke was a

speaker there as well although they weren't connected up at the time. I think that a very neat thing happened was she had a very short amount of time to talk and people were so engrossed in what she had to say – and she was talking about environmental and native populations – and the organizers were trying to get her off and a loud cry came from around the whole auditorium, “Let her talk! Let her talk!” And they let her go for a whole half an hour.

And everyone was very moved by what she had to say, I'm sure Ralph Nader was at the time as well, so which I'm sure was them getting together for the Green Party ticket later on. But those were very exciting, powerful times.

We also did a march to, from the downtown Old State Capitol Plaza to the State Capitol; we did a march for the trees. We had seen several videos about the destruction and I went out to the Pacific Northwest and saw just the devastation. You see these, the car commercials where they've got the car winding through the redwood forest and then... but you come over from Washington into Oregon and you look and there is several hundred feet of trees on either side of the highway and beyond it, it's just denuded, bald, eroding land. And it's just, it makes you sick to see that.

So we had a “Give Trees a Chance” rally and we marched – even though we were in central Illinois you can make decisions about what you buy. Don't buy redwood, don't buy cedar, don't buy fir – these are the trees they were cutting out of the old-growth forests, destroying old-growth forests and endangering, you know, the spotted owl was an issue, losing habitat. So and even now I see advertisements for cedar decking and I'm thinking, “Don't buy cedar, these things are hundreds and hundreds of years old that have been there two thousand years and you're cutting them to make a deck that you're going to get tired of in ten years and tear down and put something else up.”

And you know, you could use recycled plastic lumber made from milk gallon jugs and sawdust. You know, you don't have to destroy – there's a disconnect from the grocery store or from the shelf at the Home Depot or I mean, whatever the big box store...to what it took to getting it there, what happened getting it there. There is no environmental connection and the externalities are not evident in that price tag until now they're starting to show up.

So we wanted to create some awareness of what that meant when you go to buy something. You needed to educate yourself and that is what we were attempting to do, educate the public about this. It was actually quite a successful march. We had several hundred people there and I know a lot of people were quite surprised that this wasn't a march from the 60's that [laughter] actually and Earth... we had several leading up to the twentieth anniversary of Earth Day which we had a very large event at the state capitol complex.

And we had numerous exhibits and speakers and a wonderful celebration around that. It wasn't as successful for the thirtieth – we just had an Earth awareness fair – but that was a very large and expanded one. We actually had a solar booth from City Water Light and Power; we had photovoltaics running our whole booth. Next to us we had the Lincoln Land solar car,

which was a very innovative design, the motors they used in it, but this was actually had driven up with hydrogen fuel cell technology, it was licensed to run on the roads. And went up to the National Solar Energy Conference in Madison, Wisconsin and was the first run on highways of a photovoltaic hydrogen fuel cell vehicle. And little Lincoln Land Community College – you know, sister feeder for Sangamon State University – built this car, so very exciting things around that.

As I reflect here years later, there was something always going on. We would have at the University Earth Week – we would have our Earth Day/Earth Week activities and we would have booths and educating the student population about what was going on. I got in trouble the one time – I got an Earth flag and we didn't know who we were supposed to talk to but of the three flags in front there was one vacant flagpole and so on the way in I just ran the flag up there and then called to see if it was alright [laughter].

It was the wrong thing to do; I did get in trouble for that. But they did agree to let it fly – we had the United States flag and the State of Illinois flag and then the earth flag that was flying with those three which seemed like a very appropriate thing to do on Earth Day. And they did take it down at the end of the day. [laughter]

But there was just a wonderful feeling, like I belonged to the Sangamon State community, as a student. The administration recognized the value of what the experiential learning was all about and was reasonably cooperative within the limits of being a state-funded facility. But it was a wonderful growing experience that I wouldn't have been able to find in any other university in the Midwest that I know of.

Maybe I would've had to go to California to grow. But I wanted something that was – I was born in Illinois, I wanted something in Illinois, I wanted to do something for the Midwest, the middle part of the country. I didn't want to have to go out of state to do this, and so it was wonderful to find a university that I could find fulfillment in and personal growth which has lasted my whole life.

I continue to grow here; I became the energy services manager at City Water Light and Power in 2000, roughly 2001. And we have since grown, we've doubled in size and doubled again in our budget and so now I'm the renewable energy conservation manager. The role of the energy services office has expanded tremendously especially with what's happening now a days. It's a breath of fresh air that now the whole country is, with Al Gore's – I think he was pivotal in the *Inconvenient Truth*, bringing to mind – there's always a lot of things that bring that to the mind. A lot of hard work by a lot of scientists, a lot of environmental activists, but there has been a groundswell that I feel so fortunate that I am able to participate in and provide information to the public.

I was able to put in a 2 kilowatt photovoltaic system on a homeless shelter in Springfield. That's another one of those things, major projects that I just almost forgot that I had done. And we did a study of what the utility you know, how it interfaced with the utility. We're looking to

maybe put in more solar panels down the way here. We'll incorporate metering for customers so that if you have a solar system on your house and you produce more electricity than you need it will allow you – the utility will buy that power back at full retail rate.

At the time I installed in 1989, we threw the switch on Earth Day [laughter]. No, no I'm sorry, it started going around Earth Week but threw the switch on the summer solstice, June 21<sup>st</sup>. The utility was very wary of having a separate producer going onto their lines – would their linemen get zapped? So we do have interconnection, here is the inverter I used. Right here I'm sitting next to the Omnic power inverter. I have a twin, a second one I got as a backup. And so the industry has come a long way where now there are interconnect – in fall of 2007 we initiated those interconnection agreements and policies.

So I feel very grateful that I've been able to do so much. I struggled in my early professional career trying to find relevance and now I find so much relevance in everything I do. You know, I bought an old house three blocks from the state capitol building. It was probably headed for the wrecking ball and instead of buying a new house and tearing down more trees to build it I saved numerous trees that were probably virgin timber from this area, maybe from Wisconsin that had wonderful craftsmanship.

The embodied energy in there that it took to make that in the first place, the embodied talent, the artisans who came maybe from third world, immigrated here who were able to put that quality of skill into it. I've got this wonderful woodwork, double sets of pocket doors and operable transoms above – I have ten foot ceilings – a fireplace, two staircases.

It was in a neighborhood that was a little rough and I think my involvement and my energy understanding, I was able to insulate this house very well. I have a couple hundred watts worth of solar panels on it, building a solar green house on it to help passively heat the home. We have biodynamic gardening beds where we are producing our food locally. We've had chickens producing our eggs; instead of food going down a garbage disposal or going into the garbage – that then the neighborhood dogs come through and tear up and make a big mess – the table scraps can go to the chickens first, they'll make more eggs out of it.

We have a giant compost pile, no grass clippings or tree leaves escape our property line, they all get mulched and turned into more dirt. And it's like a whole urban homestead and Sangamon State had a homesteading project where they – Dan Knapp, another name, another professor – who, building a compost pile was one of his big things.

He went on back to California where I think he first started and established the **Urban Ore Project** where he, brought in, you know, established the opportunity, instead of wasting stuff landfilling useable items he established a source where people could bring their left over stuff that they no longer needed and then it could be resold. It didn't end up in a landfill, people could maybe better afford it, and he was able to make a business out of doing this.

Another SAGE project that we did was that we brought Dan Knapp back to Springfield to speak at one of our annual events. And so again, all those very innovative thinking professors from the early years – Bob Allen, I had in Environmental Chemistry from him as well, a different...it was called Environmental Consumer Chemistry I think. And that actually talked about the chemistry of itself from household energy use or household chemistry use.

We had these dangerously toxic things that we had warnings on in the laboratory and yet you could find them underneath a person's kitchen sink. And it didn't have danger labels on it because if you put a skull and crossbones it might not sell. So it was amazing how we as a culture have embraced a lot of progress without all the embracing of it without thinking of the consequences or just having a sense of caution.

The *Silent Spring* that brought to our minds, Rachel Carson, she more than anybody possibly brought to mind that we were poisoning our environment and killing off our songbirds who could sing to us in the spring if they're still there.

And I was born in 1950 and I was a product of this expansion. I lived, grew up in Chicago and we moved to a suburb when I was eight years old, and the Little Calumet River, we moved to Dolton, Illinois. And the Little Calumet River flowed on by and there were numerous turtles and fish and wildlife all around and we could go out and wander through the prairies and catch all kinds of wildlife and study it and maybe bring it to the nature center where they would have us let it go again because they didn't need it [laughter].

And then a chemical plant opened up upstream and dumped all of their stuff into the river and just killed off all the life in it, it became a dead river and I was so incensed. And then they – how could they do this? And so nonchalantly, Tadpole Creek, you could sit on the banks of Tadpole Creek and watch them grow legs and turn into frogs and one day they just filled it in to build another subdivision and I just couldn't believe it.

And that's what really turned me into an environmentalist was our land use and the pollution that we were just ignoring, that was happening to our ecosystems, that we should just ignore, that we had to think of a new way of doing it.

And from my – I think in one way it put me into chemistry, I always had a love for that and I thought maybe there was ways we could use chemistry and that would have been a viable career, other than energy. That I could have taken my chemistry but I think I was so within the culture, the traditional chemistry culture that it was hard to think outside of the box.

And coming down to Springfield and so completely changing my environment, moving from comfortable living to an old drafty farmhouse was the shock that I needed. You know, to actually live in nature to then begin again to understand what it was all about. Grow my organic garden and have chickens and rabbits and ducks and geese and all that stuff [laughter]. I learned what it took.

Q: Can you think of, to close, maybe to close unless you can think of anything else.

A: [Laughter]

Q: Can you think of...

A: I may have said too much.

Q: [Laughter] Never. Can you think of a favorite memory or two just to close us off, something that sticks out in your mind – something funny, something sad from SSU days, something shocking?

A: Well I think you know, one of the classes that I have to say was going over to Alex Casella's house and the – I hope I didn't forget to talk about the food co-op. [Laughter] Now that I think about it that was another one of those classes where the food co-op was one of those things where you went to find out in terms of local food production.

We had to go and what did it take and there was a food-buying club that began out of the – several professors and students at Sangamon State there that they then went from a couple of store fronts on South Grand [Avenue] they had a large store front that then they had a place where they could play music which Rudolph's Bean partly shared. But that was one of those wonderful memories of going there and experiencing where food came from in a way, you know, that you could package it and you had to participate in that.

But also Alex Casella, going over to his house [cell phone ringing] he had... [Talking on phone] Having a class at Alex Casella's house where we went to find out about the things he had done to make it more efficient. And the class, we would find at the end of class we weren't done talking. You could have a three hour class and not be done with your conversations and want to continue. So he said, "Why don't you come on over and have dinner and we'll keep going." And half the class wouldn't but half the class might go over there as well, and we would continue the conversation.

Talk about the energy it takes to cook food, what does it take to grow it, what if you did it locally in your back yard or where you had a large machine-generating, producing the large factory - producing the food. But he had, window quilts on his, they're insulating window covers on his walls. Actually I was able then, I installed a solar hot air collector panel on his upper floor of his house that heated the attic, which was a finished attic that he was able to give – traveling people would be coming through, speakers, lecturers – and they would have their own little place to stay at that time so it was nice that they could stay in a solar-heated room.

And we would have parties – it extended the community, extended into the point where you enjoyed being around each other to where we would just have dance parties there. Numerous times, maybe once a month there would be a dance party at Alex's house [laughter]. And, but

he passed away just recently in the last couple months ago and I was able to speak at his memorial service and I really appreciated him as an individual who was thinking of living beyond the box.

And he was the inspiration for my coming down to Springfield – here's this physicist teaching solar energy classes, so we definitely shared the hard science from my chemistry background and his physics so we could talk science very thoroughly. And he and the University, what it had, are what landed me in Springfield and I think helped generate an energy office with our publically owned utility, which then provided an outlet for the energy creativity that was available to me.

I think in terms of our customers here I've been able to provide a, an in-depth assessment of the technologies. You could have a lot of products come on that salesmen want to push on you and they themselves don't understand it well enough. But with my science background I could research the science, get down to the point and maybe they had a product that had value they were selling in an inappropriate fashion or maybe they had a product that wasn't worth selling.

I could evaluate these things so that when our customers would call us up and say, "Well what do you think about this?" and I could give them a very thorough understanding of the product or the technology or maybe that's not what they needed but here's something else they really did need. [Cell phone rings, talking on phone]

Q: You got kids to pick up? [Laughter]

A: Yeah. So to close I'm very grateful for Sangamon State, for the environment it fostered, the growth, the educational, and personal grown environment it provided, which has provided me with a wonderful career that I don't know if I would have been able to find any other way.

Q: Thank you very much, Bob.

A: Thank you. Thanks to Sangamon State.

(Tape Stops)

A: Yeah, and Martin King was a very fundamental person in the early SAGE history development. He was – went on and got his PhD as well, but he was a real intellectual member of the group, we enjoyed Martin a lot.

1 hour 15 minutes 33 seconds

End of Interview