

Juan Ontiveros

National Research Council committee member making D.C.'s Capitol Power Plant energy efficient

By Kira Taniguchi



Photo Debbie Finley

Due to his groundbreaking work to make UT's power plant more energy efficient, Juan Ontiveros has been appointed to a National Research Council committee to help make the controversial Capitol Power Plant in Washington D.C. more energy efficient.

Ontiveros has worked in the UT system for 18 years. He has served as executive director for Utilities and Energy Management for the last 11 of those

years. Prior to coming to Austin, he was director of facilities for the University of Texas at El Paso for seven years. His knowledge stems from his work at the White Sands Missile Range and his experience as chief engineer on a service contract for the Army Materiel Test and Evaluation Directorate. He earned his degree from the University of Texas at El Paso in mechanical engineering, with additional coursework in energy, fluid and heat transfer.

The Capitol Power Plant, which has become controversial because it runs on coal, is deteriorating as a result of age and quickly becoming less energy efficient. Ontiveros' purpose as part of the committee is to make recommendations about how the functions of the Capitol Power Plant can best be altered to meet the impending energy efficiency requirements of the U.S. Capitol Complex.

The Capitol Power Plant was

originally built in 1909 to supply steam and electricity to the U.S. Capitol Complex. Although the plant no longer produces electricity, it still provides steam and chilled water to heat and cool the 19 million square feet of space.

"For me, it is an honor to be a part of this committee, to be a part of the future of that plant," Ontiveros said. "I'm obviously pretty excited about that part of it."

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Hollingsworth

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so I was glad that it worked out that way," she said. "When he started work he could have made more money elsewhere, but we decided we'd rather stay here."

While others grew tired of the monotony of working in the same job for decades, Hollingsworth's passion for the job left him without the need or desire to seek employment outside of the city he has called home since the 1940s.

"Often my colleagues over the years would go off and get jobs with the government, but I didn't want to do that," he said. "I wanted to stay at the University and continue doing what I've been doing. I've never wanted to leave Austin."

Hollingsworth has worked on

dozens of government contracts for several divisions of the Armed Services, though the majority of his work has been with the Air Force and Navy.

Given the importance of the projects and the meticulous attention to detail necessary to carry them out to the military's satisfaction, it is not uncommon for Hollingsworth or his colleagues to spend several years working on one specific contract. In his most recent project, Hollingsworth has spent several years fine-tuning deals with sonar development for the Navy.

Hollingsworth's work was interrupted in the mid-1980s when he temporarily retired. However, after a few years away from the only professional work that he has ever known, a job that he tirelessly dedicated himself to for nearly 35 years at that point, it was no

surprise to him or Helen when he felt the pull to return to UT just four years into his retirement.

"He came back because he wanted to," Helen said. "He would have worked for free if that's the way to do it because that's his second home out there, out at the lab."

There are four other University staff members who have worked 50 or more years at UT, but even though he temporarily retired, Hollingsworth's 54 years still manages to outdistance them all, including that of legendary football coach Darrell Royal and his 52 years, Reuben Wallace's 53 years, Kenneth Vaughan's 51 years and Jack Shooter's 50 years.

Including the six years he attended UT, Hollingsworth's 60 years with UT have taught him that being a Longhorn means giving something back. He is grate-

ful that his contributions have been through work at the University that has given him so much.

"I'm proud to be a Longhorn," he said. "It's been a good relationship."

For a man who has spent nearly 75 percent of his life either attending or working for one university, Hollingsworth feels fulfilled and does not have a single regret. While he admits he does not know how much longer he will remain at UT before finally retiring for good, one thing he is sure about is that he would not trade his time at the University for anything in the world.

"It's getting up close, I may have to retire one of these days because I can't keep up with the young scientists," he said, "but I still take a lot of pride in what I do and I still love my work."

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Parmesan

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are. I get 50 to 100 emails a day. I don't have a personal assistant, and I have to respond myself.

OC: Do you really have to respond to every email yourself?

CP: Yes, if I have a real vacation, then I get about 1,000 emails to respond to when I get back.

OC: Besides your work in the higher education academic setting, how do you share your

work?

CP: A lot of what I do is outreach. For instance, I recently went to Zilker Elementary School. Children can have really insightful questions. Mostly people are really appreciative of my efforts to do outreach. Sally Ride Science has also been a fun group to work with – they aim to encourage girls to be excited about the sciences at a young age.

OC: What about women in the sciences?

CP: Many women don't have the confidence of their male peers. It is confidence that makes a difference. My mom got a master's degree in geology in the '30s, which was very rare back then. She was a fantastic role model. My father was also supportive. I have five sisters. One is a geologist. One is a practicing nurse, one has a degree in biology. Out of six females, all have university degrees. Two have degrees in psychology.

Institute for Historical Studies

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tions to previous dilemmas found by past generations.

"Obviously if one nation depletes an entire region of an ocean, that can disadvantage several other countries," Lawrence said. "So now these countries have to come to terms with working with each other."

While conferences and workshops provide scholarly fare, the real benefit of the Institute for Historical Studies is evident in the

far-reaching benefits of its collective work.

By better knowing the practical solutions to problems that have plagued mankind in the past, Hardwick and Lawrence and the rest of the institute's staff hope to ultimately bring about a better tomorrow.

"In the end our goal," Lawrence said, "is to shift away from history and toward the future."

Ontiveros

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The National Research Council (NRC) was established in 1916, after President Abraham Lincoln signed a congressional charter granted to the National Academy of Sciences, under which the NRC functions. According to the NRC Web site, their mission is "to improve government decision making and public policy, increase public education and understanding and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health."

The committee will report directly to the Architect of the Capitol (AOC), which operates the physical facilities of the Capitol and related federal buildings. The committee's project title is "Evaluation of Future Strategic and Energy Efficient Alternatives for the Delivery of Utility Services to the U.S. Capitol Complex: A Workshop." The committee is evaluating consultant-generated alternatives and will recommend how the Capitol Power Plant can best meet energy efficiency re-

quirements based on the studies and their own expertise.

"Our responsibility is to provide them [the AOC] a report at the end that says we have looked at what you've done, but we suggest you look at the following areas," Ontiveros said. "And we will give them a final report – a recommendation."

Ontiveros' connections through organizations in the industry, as well as his background in central utility plant modernization and operations, led to his appointment to the ad hoc committee. The other committee members' diverse backgrounds range from a civil engineering professor at Stanford to the CEO and co-founder of Structural Preservation Systems.

The committee, which consists of eight members and one chair, will meet twice to discuss alternative methods of energy efficiency for the Capitol Power Plant. Discussions at the first meeting, which was held in Washington D.C. in December, were mainly about their purpose and the studies they are commissioning. The second meeting will be held in Washington, D.C. this month.

Steven Fenves, committee chair, said they will point out strong and weak points in the consultant's recommended options, rank the options, recommend certain criteria for the architect to use in evaluating the proposed options, and identify additional studies needed to strengthen the case for the proposals.

"The NRC provides unbiased evaluations, advice and recommendations to federal agencies," Fenves said.

Part of the committee's challenge stems from the fact that Congress advocates the continued use of coal to operate the plant. According to Ontiveros, other challenges to making the Capitol Power Plant more energy efficient and in turn, more environmentally friendly, are the enormous upfront costs as well as finding a place to dig that will not obstruct the view of the Capitol.

"I think that they have an opportunity to be a showcase to the nation," Ontiveros said. "Right now, if you look at all of the negative press, it's kind of a black mark against the nation."

The use of coal at the Capitol Power Plant has garnered na-

tional attention. The first ever national protest against coal was held at the Capitol Power Plant on March 2. Ontiveros hopes this sparks change in Congress to move toward a more efficient and environmentally friendly plant. Soot, carbon dioxide emissions and dust particulates in the air are some of the health impacts that result from the use of coal, he said.

"When you are trying to push environmental legislation and green energy and all of these things, when the power plant that serves the Capitol is using coal – it's not a very good thing," Ontiveros said. "I think they have the opportunity to do this right." The committee's goal to make the Capitol Power Plant more environmentally friendly can benefit from Ontiveros' experience with UT's plant, which uses natural gas. Just by switching fuel, the Capitol Power Plant can cut its emissions by half.

The power plant that Ontiveros operates on UT's campus, which services about 16 million square feet, is a primary example of a large scale, energy efficient system that controls UT's energy

costs. Ontiveros said the objective should be to use as little energy as possible, as cheap as possible.

During the past 10 years, Ontiveros has invested \$150 million in energy efficient technology such as new chilling stations and combustion turbines for UT's power plant. By producing energy more efficiently, Ontiveros has been able to reduce emissions.

"If you master plan properly and carefully study your system, there are current technologies you can use to reduce your fuel costs, which pay for itself and improves the environment at the same time," Ontiveros said.

Growing pressure from the nation to find alternative methods to the Capitol Power Plant coupled with possible resistance from Congress mean Ontiveros will have to use his expertise to make effective recommendations to the architect.

"If I could get them to where they could handle all of their future growth and cut their total emissions and still emit all of their energy, it would be a great world," Ontiveros said. "So I think if I did it, they should be able to do it too."

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