

SPP director pushes for 765-kV lines, urges planners to 'think of our grandkids'

September 17, 2010

By Lynn Doan

In the world of transmission development, the 345-kV power line is still king.

Across the country, state regulators and grid operators alike have shot down plans for larger, 765-kV power lines in exchange for 345-kV ones, deeming the "extra-high-voltage" proposals too big or too expensive to build.

In April, the Southwest Power Pool Inc.'s board of directors voted to downsize two of its "priority projects" from 765-kV to 345-kV lines after analyses showed the lower voltage was more economical. Texas came to a similar conclusion while developing its competitive renewable energy zone, or CREZ, effort.

"We have a comfort level at 345-kV," SPP's transmission development director, Jay Caspary, explained during the Platts 2010 Transmission Planning and Development Forum in Washington, D.C., Sept. 16.

The Midwest ISO's executive director of transmission strategy, Jennifer Curran, described it as "our native voltage."

"It tends to be what we have today," she said, "and is sufficient."

At least for the time being.

Stepping beyond the 345-kV world, Caspary urged the transmission industry to "think of our grandkids."

"Every line we build today is going to be there for 60 years," he said. "If we upgrade in kind today, to a 345-kV line, we're just perpetuating the patchwork built today for another 60 years."

Caspary, a 30-year veteran of the transmission development business, is actively trying to revive the 765-kV aspirations of the two projects downsized by SPP's board of directors in April. The board has a chance to reverse its decision in January 2011, when it votes on the grid operator's first-long-term integrated transmission plan.

"I'm hopeful," Caspary said. "I'm not giving up."

The lines, which make up a Y shape near the central portions of Kansas and Oklahoma, were initially planned at 765 kV as part of an extra-high-voltage transmission "backbone" to strengthen the grid in the wind-rich region. But SPP's staff ultimately recommended that the lines be built at double-circuit, 345-kV, saying it was more economical.

Caspary maintained Sept. 16 that SPP's board only approved of the downsizing because they wanted people to start working on routing the lines, permitting them and planning for construction.

"Regardless of what voltage they're built at," he said, "they're still going to have to use the same paths."

A lot is riding on the decision in January, according to Caspary. On a much broader level, SPP will have to decide whether the region is ready for 765 kV or whether it is wiser to stick to what it knows.

"I really think that the decision we make in January is going to drive our decisions going forward," Caspary said. "And I don't want to have any regrets."

Caspary said he is particularly concerned about getting 765-kV lines up for the sake of moving wind power. Several of the transmission corridors traveling through the region's windiest areas are narrow and restricted, he said.

"If we've only got a limited corridor, we have to build 765-kV there," he said. "I want that backbone line to be the straightest possible."

Both the grid operator and wind power generators, he said, will need "the headroom."

The Midwest ISO is tackling similar issues as it begins to designate the region's first regional multivalue projects. In anticipation of FERC's approval, the grid operator is working on a group of "starter MVPs" that could be built at either 765 kV or 345 kV.

"We are addressing those questions as we move forward," Curran said. "But we have no consensus as to whether this is going to be a 765-kV or 345-kV build-out."

What it all boils down to, she said, is what you believe the future holds.

"If you believe a lot of wind is going to be sourced from the Midwest, you think a 765-kV solution is appropriate," she said. "If you think we face some serious carbon legislation that could really change the make-up of our generation portfolio, then, again, that's also going to require more wind. And again, you might be thinking of a 765-kV solution."

But at this point, Curran said, the grid operator is leaving both options open. *i*