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Cooling towers being erected

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Editor

SOMERSET — Drivers who are going over the Braga Bridge can look down and see the progress that is being made with the construction of two cooling towers for the Brayton Power Station that will eventually be 497 feet high and 406 feet in diameter.

The construction on the concrete cooling towers in order to decrease the thermal discharge and water intake of the power plant in Mount Bay started in May. Concrete piles that will support the towers were put in, a coffer dam where a pump house will be located has been built and workers have started to erect the shells of the cooling towers.

Brian Wright, the manager of the cooling towers project for Dominion Energy, the owner of the coal fired power plant, said the work has been going smoothly and said the entire project will be completed by May of 2012. He said a majority of the shells of the cooling towers should be constructed by next year. The cooling towers will be used with four units. Mr. Wright said two units would be online by the fall of 2011 and two more units would be operating in the spring of 2012. He said those are deadlines that have been set by the United States Environmental Protection Agency and said Dominion Energy has a very tight schedule to make those deadlines.

Mr. Wright said one of the cooling towers is about a month ahead of the schedule of the other one, as far as the construction of them.

Mr. Wright said Dominion Energy has been buying the concrete for the cooling towers from local suppliers. Originally, Dominion was planning to build a concrete plant on the Brayton Power Station property to make concrete for the towers, but Mr. Wright said the company went away from that approach because of the permitting process associated with it. He said the amount of truck deliveries of concrete being brought onto the property for the towers depends on the size of the concrete pour for the day. He said the truck deliveries have not created traffic problems in the area.

In order to get concrete to high elevations, Mr. Wright said trucks will be driven into the tower area and three-yard buckets will be filled and hoisted up to different heights so that the material can be placed in the structure.

Mr. Wright said the most challenging aspect of the project is the erection of the shells of the towers.

Mr. Wright said the work on the towers will be done year round, but said there are limitations on the work that depend on wind and temperature. He said two shifts of workers are involved with the construction of the towers.

Mr. Wright said the work on the cooling towers will become more noticeable to neighbors in a couple of months when the height of the shells goes above the tree lines.

As the cooling towers were planned, neighbors have complained that they will look like the Three Mile Island towers of that nuclear power plant.

Barry Ketschke, station director for Brayton Power Station, said a meeting with neighbors of the power plant was held in October to update them on the work on the towers.

Pre cast columns for the cooling towers project were purchased from a business in western Massachusetts. Mr. Wright said the rings around the towers were pre cast.

The cost to build the cooling towers has been estimated at \$620 million. The lead contractor for the project is Kiewit Construction Company of Omaha, Nebraska. The project involves 1.5 miles of underground circulating water pipe and box culverts, 75,000 cubic yards of concrete, 10,000 tons of reinforcing steel, 2,000 piles, 6,500 linear feet of duct bank conduit, two new on-site 115 kilovolt underground transmission lines, four 4,900 horsepower cooling tower supply pumps and corresponding pump structure and four 900 horsepower seawater make-up pumps. **At the peak of construction, Dominion says the project will employ approximately 250 local union craftspersons and more than 25 local suppliers and vendors will provide materials and services to the project.**

Mr. Ketschke said the cooling towers will not change how electricity is made at the coal fired power plant. He noted that steam will still be generated to put into a boiler to create electricity. He said the old system for the power plant had separate pumps for the units, but with the cooling towers, he said there would be common pumps for the units. With the cooling towers, water will be pumped to the towers through enormous pipes that are 90 inches in diameter and then drained back to units to cool them down. Water will be drained to the upper discharge basin in pipes that are 108 inches in diameter. The water will then return to the pump house in the closed loop cooling project.

Mr. Wright said he thinks the Brayton Point project is the first time an existing power plant has been retrofitted with cooling towers.

Mr. Wright said Dominion purchased two sets of cooling tower forms in Austria. He said Dominion learned there were no such forms in the U.S. because cooling towers had not been built in the country in 15 years.

A tower crane put inside the middle of the shell will climb as the shell is built higher and will remain until the tower is done.

Mr. Wright said he has been taking a lot of administrators from Dominion on tours of the work site. Mr. Ketschke said the tours give people a sense of the size of the structure which he said has made some of them comment that it looks like a sports stadium is being built. He said some of them are in awe of the size of the pipes.

The cooling towers are expected to decrease both water intake flow and thermal discharges into Mount Hope Bay by the power plant by 95 percent. Environmentalists have alleged in the past that the heat from the power plant has impacted the finfish population in the bay. Mr. Ketschke said he still believes over fishing is the reason for the decline of the flounder in Mount Hope Bay and not water being heated by the power plant. He pointed out that flounder populations have decreased in other places where power plants are not located.

"I don't know if there will be a resurgence of flounder," Mr. Ketschke said. "Only time will tell if that does happen."