

### Cooling Tower Project Brightens Future at Fort Martin



*Demolition of the original wooden cooling tower ring begins.*

The replacement of the original cooling ring on the Fort Martin Unit 2 cooling tower means higher efficiency as the plant begins its next 50 years of service.

Unit 2 went online in 1968 and generates 546 megawatts (MW). The hyperbolic cooling tower reduces the temperature of approximately 250,000 gallons of water per minute.

So it may surprise some to find that the original cooling tower rings were made of wood.

"In fact, wood is a very good material for this kind of application when it stays wet," said Project Engineer Paul Marks. "Problems arise when the wood transitions from wet to dry and back, for instance, when the unit goes offline for maintenance outages." Over the years, the wet-dry cycle can cause deterioration, and the Unit 2 ring was showing wear.

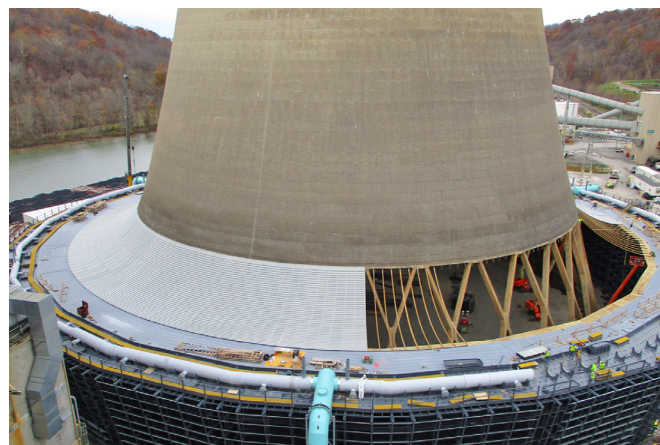
This modification removed the original ring, and replaced it with a reinforced fiberglass structure.

"The fiberglass structure is very robust and will not have the same tendency to deteriorate," Paul said. "The new ring will also result in an improved heat rate and greater efficiency."

Improving a power plant's heat rate can lower fuel consumption, which has multiple benefits. Using less fuel lowers costs, directly benefitting FirstEnergy and our customers. Heat rate improvement also reduces overall carbon dioxide (CO<sub>2</sub>) and other emissions. In fact, EPRI – the Electric Power Research Institute – recommends optimizing heat rate as a first line of CO<sub>2</sub> reduction, and notes that heat rate optimization also decreases other emissions, such as nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), particulates and mercury.

"This was a very successful project," said Paul, "and should be a major asset in our efforts to maintain the reliability of our regulated generation plants for years to come."

This article originally appeared in the FirstEnergy *Generation Online* newsletter, March 14, 2019.



*Reconstruction of the new fiberglass cooling ring nears completion.*

## project profile – fort martin



*Project Start – Construction of the new cooling tower ring is underway.*



*Project Completion – The new cooling tower ring will provide greater efficiency.*

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