

How do we get power when Sims is offline?

From the Board of Light and Power's origin in 1896 until the initial Sims power plant was constructed in the early 1960s, all of the City of Grand Haven's power was produced and used within our local distribution system. Essentially, during these years, the system was electrically an independent "island" having no ties or interactions with the larger regional transmission system, what many now call the power grid.



Following the construction of Sim's Units 1 and 2, high voltage electric lines were installed within the Grand Haven community to interconnect the new power plant and our local distribution network with the regional transmission system. This allowed the Sims plant to operate "synchronously" or in parallel with the regional system, allowing for power to be exchanged with other interconnected utilities. In other words, when the Sims power plant was overproducing (above the power needs of the locally connected "retail" customers), this power could be sold at "wholesale" to others and when Sims was producing less, or offline entirely, our local system could be supplied with power from other more remote generation sources. No longer was the reliability of the local distribution system based only on the ability of local generating units to produce energy; the Sims units could then be supplemented by other generators regionally. The reliability of the system improved dramatically as a result and these interconnections allowed Sims to be run more efficiently as a base load resource.

Sims Unit 3 became operational in 1983, and Units 1 and 2 were retired shortly thereafter. Sims Unit 3 continues to supply the majority of the power our community needs. In 2016, Sims 3 generated approximately 283 million kWh while the system annual load was 313 million kWh (or Sims output was 90.4% of the total system annual load). Interestingly, during 2016, over 96 million kWh from Sims generation output was sold to the wholesale power market and 126 million kWh was purchased from the market – a "net" input into the system of 30 million kWh. 25 million kWh of this amount was attributable to long term power purchase agreements from renewable sources (wind energy and landfill gas generation).

The high voltage transmission power lines that run through Grand Haven (originally built in the early 1960s) and the interconnections to the power grid to the north and south of our community remain critical elements of our system's electrical infrastructure, allowing the GHBLP to exchange power in the wholesale power markets and supply electricity to our system when Sims Unit 3 is offline. These lines, however, have now reached the end of their useful life (after more than 50 years of service) and can no longer transmit enough energy reliably to supply our system during peak load conditions when Sims is not generating. As such, this summer the GHBLP completed phase 1 of a three year transmission upgrade project. Phase 2 will be completed in 2018 with the final phase constructed in 2019. After completion of this project, the GHBLP transmission system and associated grid interconnections will again be capable of supplying adequate and reliable power from the regional power grid to our system year-round without Sims generation, even during peak load conditions, if necessary.