



Big Rivers

ELECTRIC CORPORATION

Cumberland Hydropower Capacity Analysis
October 2020



BIG RIVERS ELECTRIC CORPORATION

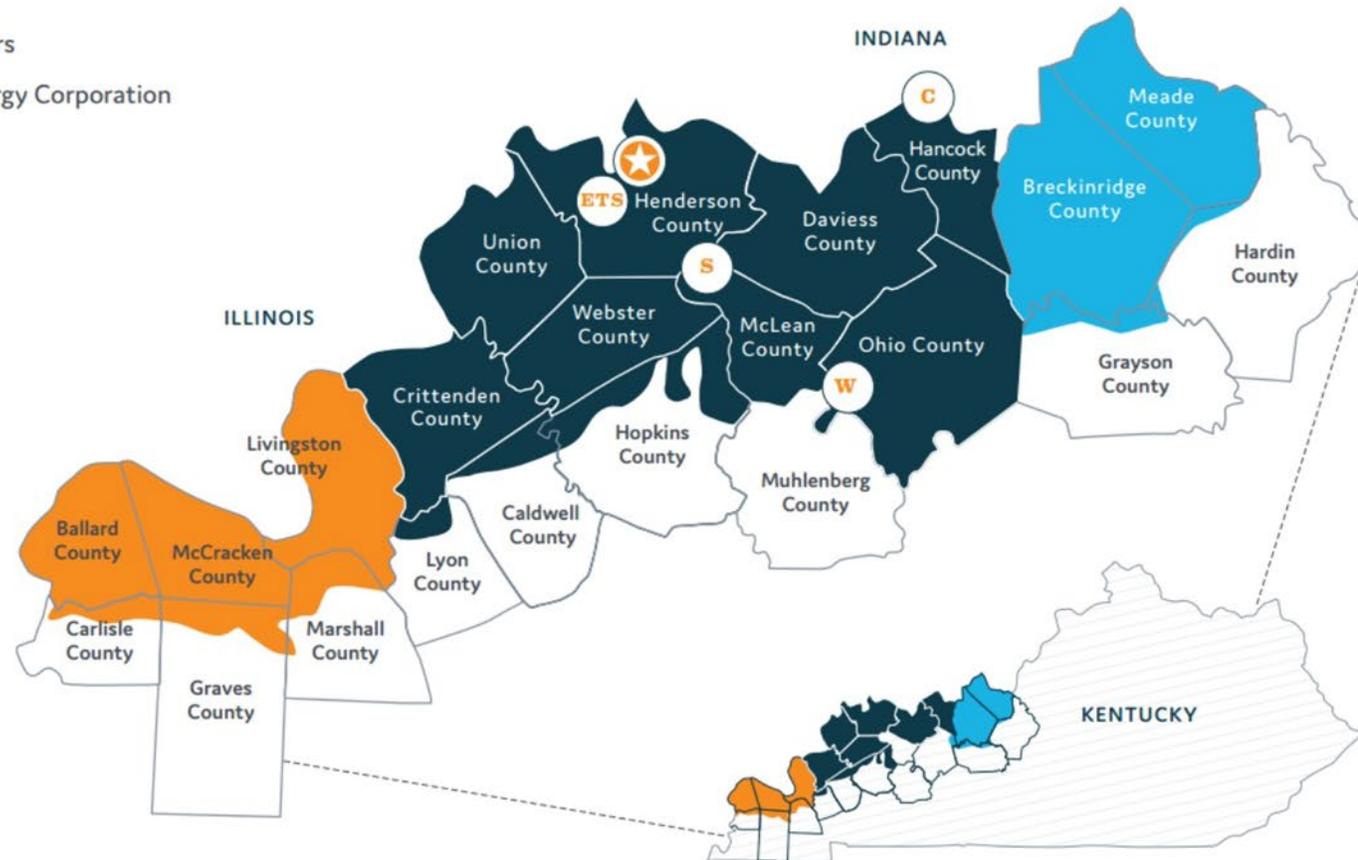


- **Big Rivers** supplies wholesale electric generation and transmission service to three electric distribution cooperatives (“Member-Owners”):
 - **Jackson Purchase Energy Corporation – Paducah, KY**
 - **Kenergy Corp. – Henderson, KY**
 - **Meade County Rural Electric Cooperative Corporation – Brandenburg, KY**
- We are headquartered in Henderson, KY.
- Big Rivers is a **not-for-profit** electric cooperative that is owned by the Member-Owners (customers) it serves. Combined, our Members provide electric service for more than 118,000 retail homes and businesses in 22 western Kentucky counties.
- Likewise, the Distribution Coops are owned by the customers they serve.
- Big Rivers and its Member-Owners are regulated utilities, which includes oversight by the Kentucky Public Service Commission.

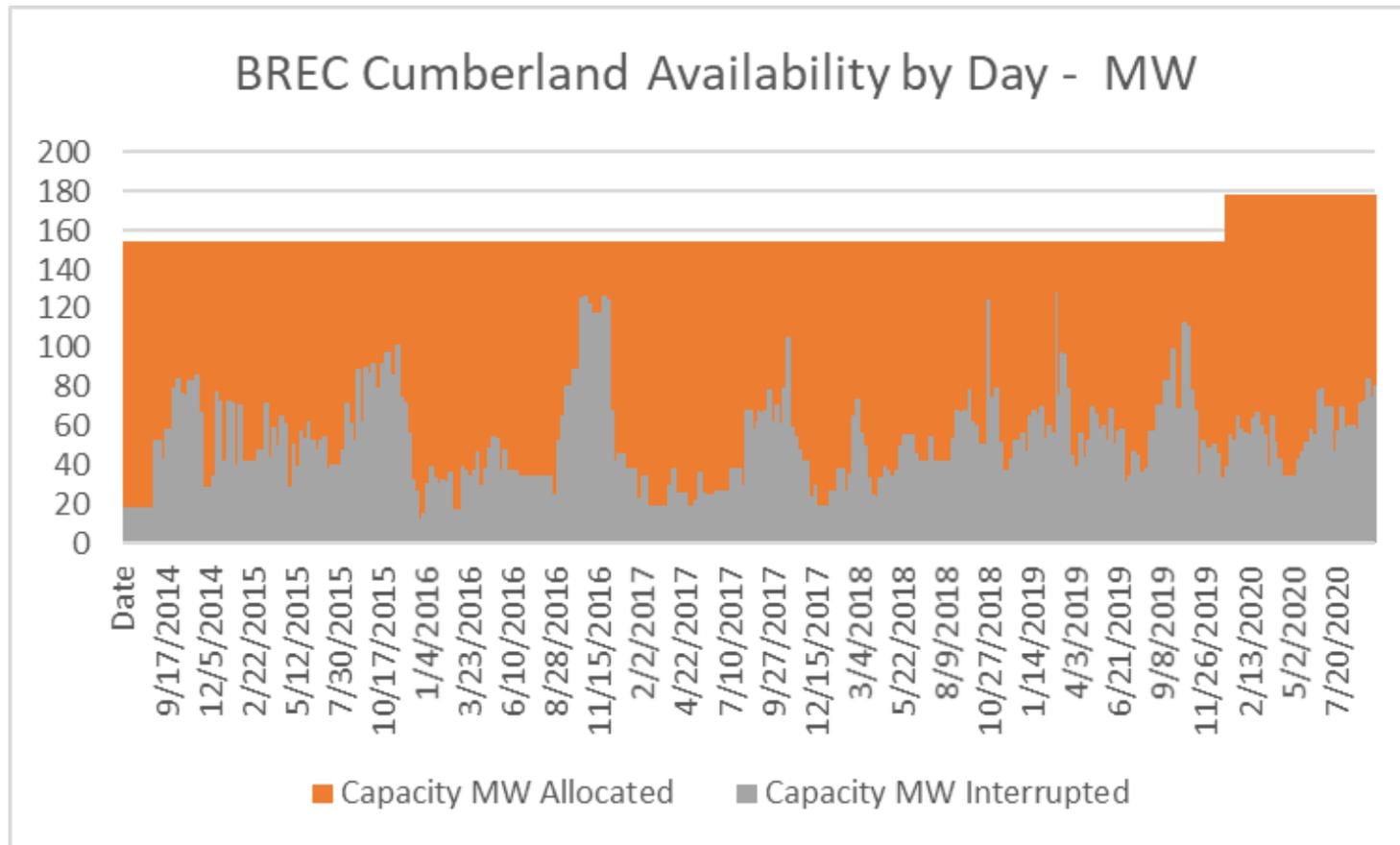
BIG RIVERS' SERVICE TERRITORY



- 📍 Big Rivers Headquarters
- 🟠 Jackson Purchase Energy Corporation
- 🟢 Kenergy Corporation
- 🟡 Meade County RECC



BIG RIVERS' 178 MW ALLOCATION (154 MW RIOP)



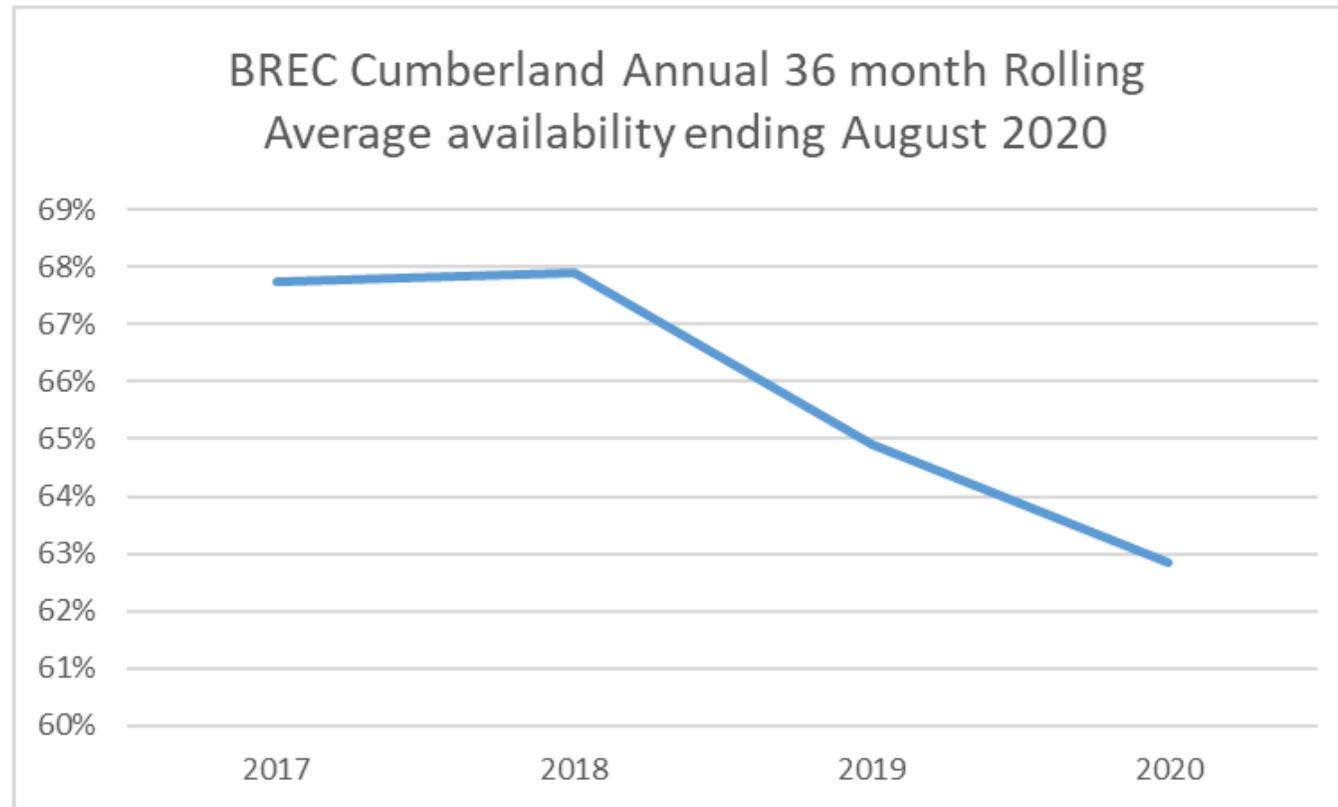
CUMBERLAND AVAILABILITY %



BREC Cumberland Capacity Availability by Day - %



AVAILABILITY 3-YEAR ROLLING AVERAGE*



*MISO qualification for non-external resources is 36 month rolling average

MISO POOLED AVERAGE FORCED OUTAGE RATE



Planning Year 2020-2021 Pooled EFORd Class	Pooled EFORd (%)	Data Source
Combined Cycle	5.70	MISO
Combustion Turbine (0-20 MW)	40.39	MISO
Combustion Turbine (20-50 MW)	15.29	MISO
Combustion Turbine (50+ MW)	4.65	MISO
Diesel Engines	23.53	MISO
Fluidized Bed Combustion	9.24	MISO*
HYDRO (0-30MW)	9.24	MISO*
HYDRO (30+ MW)	9.24	MISO*
Nuclear	9.24	MISO*
Pumped Storage	9.24	MISO*
Steam - Coal (0-100 MW)	5.33	MISO
Steam - Coal (100-200 MW)	9.24	MISO*
Steam - Coal (200-400 MW)	10.16	MISO
Steam - Coal (400-600 MW)	9.24	MISO*
Steam - Coal (600-800 MW)	9.24	MISO
Steam - Coal (800-1000 MW)	9.24	MISO*
Steam - Gas	12.54	MISO
Steam - Oil	9.24	MISO*
Steam - Waste Heat	9.24	MISO*
Steam - Wood	9.24	MISO*

*MISO system-wide weighted forced outage rate used in place of class data for those with less than 30 units reporting 12 or more months of data

NOTE: These numbers can be found in the annual LOLE Study Report

***Cumberland System 3 year Rolling Average EFORd 1.1% Per GADS GORP report**

MISO Accreditation of Capacity per BPM 011 Resource Adequacy:

GVTC * (1-XEFORd)