

## Summer 2023 DER Asset Class Average Unavailability Factors

The following table provides the list of Asset Class Average Unavailability Factors by Asset Source ID for DER for the Summer 2023 Capability Period, used by the Aggregation System. The Class Average Unavailability Factors serve as a proxy value for actual historical Aggregation or Asset Unavailability Factors required to calculate the Facility Seasonal Factors. For additional details regarding class average values and usage of class average, refer to the ICAP Manual Section 4.5.

Capability Period	Asset Source ID	Asset Type	Source Type(s)	Source Fuel(s)	Response Type	Class Average Unavailability Factor (%)
Summer 2023	101	Demand Reduction	Demand Reduction	Curtailement	C	10.14
Summer 2023	102	Demand Reduction	Demand Reduction	Curtailement	B	10.14
Summer 2023	103	Demand Reduction	Demand Reduction	Curtailement	I	10.14
Summer 2023	104	Demand Reduction	Demand Reduction	Curtailement	G	10.14
Summer 2023	201	Generator	Combined Cycle	Coal		5.07
Summer 2023	202	Generator	Combined Cycle	Butane		5.07
Summer 2023	203	Generator	Combined Cycle	Diesel		5.07
Summer 2023	204	Generator	Combined Cycle	Hydrogen		5.07
Summer 2023	205	Generator	Combined Cycle	Jet Fuel		5.07
Summer 2023	206	Generator	Combined Cycle	Kerosene		5.07
Summer 2023	207	Generator	Combined Cycle	Methane (Bio Gas)		5.07
Summer 2023	208	Generator	Combined Cycle	Natural Gas		5.07
Summer 2023	209	Generator	Combined Cycle	No. 2 Fuel Oil		5.07
Summer 2023	210	Generator	Combined Cycle	No. 4 Fuel Oil		5.07
Summer 2023	211	Generator	Combined Cycle	No. 6 Fuel Oil		5.07
Summer 2023	212	Generator	Combined Cycle	Other		5.07
Summer 2023	213	Generator	Combined Cycle	Propane		5.07
Summer 2023	214	Generator	Combined Cycle	Waste Heat		5.07
Summer 2023	215	Generator	Combined Cycle	Wood and/or Wood Waste		5.07
Summer 2023	216	Generator	Cogeneration	Butane		5.07
Summer 2023	217	Generator	Cogeneration	Coal		5.07
Summer 2023	218	Generator	Cogeneration	Diesel		5.07
Summer 2023	219	Generator	Cogeneration	Hydrogen		5.07
Summer 2023	220	Generator	Cogeneration	Jet Fuel		5.07
Summer 2023	221	Generator	Cogeneration	Kerosene		5.07
Summer 2023	222	Generator	Cogeneration	Methane (Bio Gas)		5.07
Summer 2023	223	Generator	Cogeneration	Natural Gas		5.07
Summer 2023	224	Generator	Cogeneration	No. 2 Fuel Oil		5.07

Capability Period	Asset Source ID	Asset Type	Source Type(s)	Source Fuel(s)	Response Type	Class Average Unavailability Factor (%)
Summer 2023	225	Generator	Cogeneration	No. 4 Fuel Oil		5.07
Summer 2023	226	Generator	Cogeneration	No. 6 Fuel Oil		5.07
Summer 2023	227	Generator	Cogeneration	Other		5.07
Summer 2023	228	Generator	Cogeneration	Propane		5.07
Summer 2023	229	Generator	Cogeneration	Refuse		5.07
Summer 2023	230	Generator	Cogeneration	Waste Heat		5.07
Summer 2023	231	Generator	Cogeneration	Wood and/or Wood Waste		5.07
Summer 2023	232	Generator	Combustion Turbine	Butane		12.94
Summer 2023	233	Generator	Combustion Turbine	Diesel		4.55
Summer 2023	234	Generator	Combustion Turbine	No. 6 Fuel Oil		28.27
Summer 2023	235	Generator	Combustion Turbine	Jet Fuel		12.94
Summer 2023	236	Generator	Combustion Turbine	Kerosene		12.94
Summer 2023	237	Generator	Combustion Turbine	Methane (Bio Gas)		18.97
Summer 2023	238	Generator	Combustion Turbine	Natural Gas		18.97
Summer 2023	239	Generator	Combustion Turbine	No. 2 Fuel Oil		28.27
Summer 2023	240	Generator	Combustion Turbine	No. 4 Fuel Oil		28.27
Summer 2023	242	Generator	Combustion Turbine	Propane		12.94
Summer 2023	243	Generator	Combustion Turbine	Coal		6.93
Summer 2023	244	Generator	Combustion Turbine	Waste Heat		12.94
Summer 2023	245	Generator	Fuel Cell	Hydrogen		11.53
Summer 2023	246	Generator	Conventional Hydro	Water		14.44
Summer 2023	247	Generator	Internal Combustion	Butane		12.94
Summer 2023	248	Generator	Internal Combustion	Diesel		4.55
Summer 2023	250	Generator	Internal Combustion	Jet Fuel		12.94
Summer 2023	251	Generator	Internal Combustion	Kerosene		12.94
Summer 2023	252	Generator	Internal Combustion	Methane (Bio Gas)		18.97
Summer 2023	253	Generator	Internal Combustion	Natural Gas		18.97
Summer 2023	254	Generator	Internal Combustion	No. 2 Fuel Oil		28.27
Summer 2023	255	Generator	Internal Combustion	No. 4 Fuel Oil		28.27
Summer 2023	256	Generator	Internal Combustion	No. 6 Fuel Oil		28.27
Summer 2023	258	Generator	Internal Combustion	Propane		12.94
Summer 2023	259	Generator	Internal Combustion	Wood and/or Wood Waste		12.94
Summer 2023	260	Generator	Jet Engine	Butane		13.9
Summer 2023	261	Generator	Jet Engine	Diesel		13.9
Summer 2023	262	Generator	Jet Engine	Jet Fuel		13.9
Summer 2023	263	Generator	Jet Engine	Kerosene		13.9

Capability Period	Asset Source ID	Asset Type	Source Type(s)	Source Fuel(s)	Response Type	Class Average Unavailability Factor (%)
Summer 2023	264	Generator	Jet Engine	Methane (Bio Gas)		13.9
Summer 2023	265	Generator	Jet Engine	Natural Gas		13.9
Summer 2023	266	Generator	Jet Engine	No. 2 Fuel Oil		13.9
Summer 2023	267	Generator	Jet Engine	No. 4 Fuel Oil		13.9
Summer 2023	268	Generator	Jet Engine	No. 6 Fuel Oil		13.9
Summer 2023	269	Generator	Jet Engine	Other		13.9
Summer 2023	270	Generator	Jet Engine	Propane		13.9
Summer 2023	271	Generator	Steam Turbine	Refuse		12.94
Summer 2023	272	Generator	Steam Turbine	Wood and/or Wood Waste		12.94
Summer 2023	273	Generator	Steam (BWR Nuclear)	Uranium		1.52
Summer 2023	274	Generator	Steam (PWR Nuclear)	Uranium		2.8
Summer 2023	275	Generator	Steam Turbine	Butane		12.94
Summer 2023	276	Generator	Steam Turbine	Coal		6.93
Summer 2023	277	Generator	Steam Turbine	Diesel		4.55
Summer 2023	278	Generator	Steam Turbine	Jet Fuel		12.94
Summer 2023	279	Generator	Steam Turbine	Kerosene		12.94
Summer 2023	280	Generator	Steam Turbine	Methane (Bio Gas)		18.97
Summer 2023	281	Generator	Steam Turbine	Natural Gas		18.97
Summer 2023	282	Generator	Steam Turbine	No. 2 Fuel Oil		28.27
Summer 2023	283	Generator	Steam Turbine	No. 4 Fuel Oil		28.27
Summer 2023	284	Generator	Steam Turbine	No. 6 Fuel Oil		28.27
Summer 2023	286	Generator	Steam Turbine	Propane		12.94
Summer 2023	301	Energy Storage	Energy Storage	Battery		11.53
Summer 2023	302	Energy Storage	Pumped Storage Hydro	Water		11.53
Summer 2023	303	Energy Storage	Fly Wheel	Fly Wheel		11.53
Summer 2023	401	Solar	Photovoltaic	Sunlight		46.37
Summer 2023	501	Wind	Wind Turbine	Wind		84
Summer 2023	601	Landfill Gas	Combustion Turbine	Methane (Bio Gas)		34.35
Summer 2023	602	Landfill Gas	Internal Combustion	Methane (Bio Gas)		34.35
Summer 2023	603	Landfill Gas	Steam Turbine	Methane (Bio Gas)		34.35