

SOR CCR

EQUIPMENT BUILDING	CATEGORY	DESCRIPTION	NEED CODE
	Mechanical measurements		
		Outside temperature	M
Generating stations			
	Total output		
		Total active power output	M
		Total reactive power output	M
SVC			
	Control and signaling		
		MBPSS-ACTIVE	S
		AUTO MODE ON/OFF	S
	Electrical measurements		
		B-REF SVCnn	M, m
		CURRENT PHA SVCnn	M
		MVAR SVCnn	M, m
		GAIN SVCnn	M, m

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE	
Synchronous compensator	Control and signaling	Excitation MAN/AUTO	S, s	
		Multifunctional stabilizer ON/OFF mode MBPSS	S, s	
		Electrical measurements		
		Voltage $\emptyset AB$	M, m	
		Vars	M, m	
		Reference voltage	M, m	
	CXC	Control and signaling	Backup bypass device	S
			Automatic reinsertion system B ON/OFF	S
			Automatic reinsertion system A ON/OFF	S
		Electrical measurements	Capacitor current $\emptyset C$	M
Current capacitor $\emptyset C$, protection system A or B			M	
Current capacitor $\emptyset B$, protection system A or B			M	

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Current capacitor $\emptyset A$, protection system A or B	M
		Capacitor current $\emptyset A$	M, m
		Capacitor current $\emptyset B$	M
	Mechanical measurements		
		Reconnection delay for protection system A	M
		Reconnection delay for protection system B	M
Load-shedding device			
	Alarms		
		Abnormal condition in load-shedding devices	
	Control and signaling		
		Automatic ON/OFF	S
	Electrical measurements		
		PT Voltage MAIS	M
		Calculated total real power of facility sum transformer power	M
CIRCUIT BREAKER			
	Control and signaling		
		Circuit breaker closed	S, s

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
Wind	Electrical measurements		
		Active power generated by wind turbine, 10-minute minimum	M
		Active power generated by wind turbine, 10-minute maximum	M
		Available capacity from wind turbines, 10-minute average	M
		Available capacity from wind turbines, 10-minute minimum	M
		Active power generated by wind turbine, 10-minute standard deviation	M
		Available capacity from substation, 10-minute average	M
		Active power generated, 10-minute standard deviation	M
		Available capacity from substation, 10-minute minimum	M
		Available capacity from substation, 10-minute maximum	M
		Total available capacity from wind farm, 10-minute average	M
		Total available capacity from wind farm, 10-minute minimum	M
		Available capacity from wind turbines, 10-minute maximum	M
		Active power generated by wind turbine, 10-minute average	M
		Active power generated, 10-minute minimum	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Active power generated, 10-minute average	M
		Medium-voltage line current	M
		Medium-voltage line	M
		Medium-voltage line active power	M
		High-voltage line voltage	M
		High-voltage line reactive power	M
		High-voltage line active power	M
		Total available capacity from wind farm, 10-minute maximum	M
		Medium-voltage line reactive power	M
		Active power generated, 10-minute maximum	M
		High-voltage line current	M

Mechanical measurements

		Meteorological mast #n, wind direction at xx m, 10-minute average	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute average	M
		Meteorological mast #n, precipitation rate at xx m, 10-minute average	M
		Meteorological mast #n, wind direction at xx m, 10-minute maximum, heated wind vane	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Meteorological mast #n, wind direction at xx m, 10-minute minimum, heated wind vane	M
		Meteorological mast #n, wind direction at xx m, 10-minute standard deviation, heated wind vane	M
		Meteorological mast #n, wind direction at xx m, 10-minute average, heated wind vane	M
		Meteorological mast #n, wind direction at xx m, 10-minute maximum	M
		Meteorological mast #n, horizontal wind speed at xx meters, 10-minute standard deviation	M
		Meteorological mast #n, wind direction at xx m, 10-minute standard deviation	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute maximum, heated anemometer	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute minimum, heated anemometer	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute standard deviation, heated anemometer	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute average, heated anemometer	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute maximum	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute minimum	M
		Meteorological mast #n, vertical wind speed at xx m, 10-minute standard deviation	M
		Meteorological mast #n, wind direction at xx m, 10-minute minimum	M
		Wind turbine nn, temperature at nacelle height, 10-minute average	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Wind turbine nn, wind direction, 10-minute average	M
		Wind turbine nn, horizontal wind speed, 10-minute maximum	M
		Wind turbine nn, horizontal wind speed, 10-minute minimum	M
		Wind turbine nn, horizontal wind speed, 10-minute standard deviation	M
		Wind turbine nn, horizontal wind speed, 10-minute average	M
		Wind turbine nn, nacelle direction, 10-minute maximum	M
		Wind turbine nn, wind direction, 10-minute standard deviation	M
		Meteorological mast #n, precipitation rate at xx m, 10-minute minimum	M
		Wind turbine nn, wind direction, 10-minute maximum	M
		Meteorological mast #n, precipitation rate at xx m, 10-minute standard deviation	M
		Wind turbine nn, nacelle direction, 10-minute minimum	M
		Wind turbine nn, nacelle direction, 10-minute standard deviation	M
		Wind turbine nn, nacelle direction, 10-minute average	M
		Meteorological mast #n, precipitation rate at xx m, 10-minute maximum	M
		Wind turbine nn, temperature at nacelle height, 10-minute standard deviation	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Wind turbine nn, temperature at nacelle height, 10-minute minimum	M
		Wind turbine nn, temperature at nacelle height, 10-minute maximum	M
		Wind turbine nn, wind direction, 10-minute minimum	M
		Meteorological mast #n, temperature at xx meters, 10-minute maximum	M
		Meteorological mast #n, horizontal wind speed at xx m, 10-minute maximum, heated anemometer	M
		Meteorological mast #n, temperature at xx meters, 10-minute average	M
		Meteorological mast #n, temperature at xx meters, 10-minute standard deviation	M
		Meteorological mast #n, temperature at xx meters, 10-minute minimum	M
		Meteorological mast #n, horizontal wind speed at xx meters, 10-minute average	M
		Meteorological mast #n, horizontal wind speed at xx meters, 10-minute minimum	M
		Meteorological mast #n, horizontal wind speed at xx meters, 10-minute maximum	M
		Meteorological mast #n, relative humidity at xx meters, 10-minute average	M
		Meteorological mast #n, relative humidity at xx meters, 10-minute standard deviation	M
		Meteorological mast #n, barometric pressure at xx meters, 10-minute maximum	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Meteorological mast #n, horizontal wind speed at xx m, 10-minute minimum, heated anemometer	M
		Meteorological mast #n, relative humidity at xx meters, 10-minute minimum	M
		Meteorological mast #n, horizontal wind speed at xx m, 10-minute standard deviation, heated anemometer	M
		Meteorological mast #n, horizontal wind speed at xx m, 10-minute average, heated anemometer	M
		Meteorological mast #n, barometric pressure at xx meters, 10-minute minimum	M
		Meteorological mast #n, barometric pressure at xx meters, 10-minute standard deviation	M
		Meteorological mast #n, barometric pressure at xx meters, 10-minute average	M
		Meteorological mast #n, relative humidity at xx meters, 10-minute maximum	M
	Signaling		
		Status of factor power/voltage control mode	S
		Status of substation disconnect switches	S
		Status of centralized control system	S
		Status of substation circuit breakers	S
	Statistics		
		Number of wind turbines stopped due to strong wind conditions, 10-minute average	M
		Number of wind turbines stopped due to ice/frost conditions, 10-minute maximum	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Number of wind turbines stopped due to strong wind conditions, 10-minute minimum	M
		Number of wind turbines stopped due to ice/frost conditions, 10-minute average	M
		Number of wind turbines stopped due to low temperature, 10-minute average	M
		Number of wind turbines stopped due to low temperature, 10-minute minimum	M
		Number of wind turbines stopped due to low temperature, 10-minute maximum	M
		Number of wind turbines stopped due to high temperature, 10-minute average	M
		Number of wind turbines stopped due to high temperature, 10-minute maximum	M
		Number of wind turbines stopped due to strong wind conditions, 10-minute maximum	M
		Number of wind turbines stopped due to high temperature, 10-minute minimum	M
		Number of available wind turbines, 10-minute average	M
		Number of wind turbines stopped due to light wind conditions, 10-minute average	M
		Number of wind turbines stopped due to ice/frost conditions, 10-minute minimum	M
		Number of available wind turbines, 10-minute maximum	M
		Number of wind turbines stopped due to light wind conditions, 10-minute maximum	M
		Number of available wind turbines, 10-minute minimum	M
		Number of wind turbines stopped due to light wind conditions, 10-minute minimum	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
Converter unit			
	Control and signaling		
		RPC "Q" mode	S
		RPC "AUTO" mode	S
		STOP/START	S
		RAMPING/STOP RUN	S
		Capacity reduction	S
		RPC "U" mode	S
		READY TO START	S
		IMPORT/EXPORT MODE	S
	Electrical measurements		
		Available power	M
		DC current	M
		Power setpoint	M
		QRef	M
		Power ramp rate	M

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
		Active power	M
		Gamma	M
		Reactive power	M
		Overload capacity	M
		VRef	M
		DC voltage	M
	Signaling ready (energized)		
		Converter unit ready on HQ side	S
		HQ filters OFF mode	S
		Converter unit energized on HQ side	S
	Signaling ready to start		
		Converter unit energized	S
		AC voltage present on HQ side	S
		CPC ready for operation on HQ side	S
		RPC ready for operation on HQ side	S

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
	Transformer		
		Frequency	M
		Primary voltage XFO	M
Generating unit			
	Generator		
		Energy	M
		Active power	M
		Reactive power	M
		Current $\varnothing A$	M
		Voltage $\varnothing AB$	M
	Excitation and field circuit breaker		
		Manual/Auto excitation	S
		Voltage stabilizer ON/OFF	S
	Speed governor		
		Control setting for gate ON/OFF MODE	S

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
Line			
	Control and signaling		
		ION sensor to record harmonics ON/OFF	S, s
		Voltage present	S, s
	Geomagnetic storm detection		
		Harmonic voltage magnitude 8, kV	M, m
		Harmonic voltage magnitude 1, kV	M, m
		Harmonic voltage magnitude 2, kV	M, m
		Harmonic voltage magnitude 3, kV	M, m
		Harmonic voltage magnitude 4, kV	M, m
		Harmonic voltage magnitude 5, kV	M, m
		Harmonic voltage magnitude 7, kV	M, m
		Even-order harmonic distortion	M, m
		Harmonic voltage magnitude 6, kV	M, m

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
	Electrical measurements		
		Active power MW	M, m
		Installation frequency, Hz	M, m
		Current \emptyset A	M, m
		Reactive power MX	M, m
		Voltage kV, \emptyset AB	M, m
	Frequency measurement reading for LFC		
		Installation frequency, Hz	M, m
Disconnect switch			
	Remote-controlled motorized disconnect switch		
		Disconnect switch in closed position	S, s
		Distance ON/OFF	S
		Disconnect switch in open position	S, s
Transformer			
	Mechanical measurements		
		Socket indication	S, s

EQUIPMENT	CATEGORY	DESCRIPTION	NEED CODE
	≥44kV transformer or generator		
		Active power MW	M, m
		Energy, generator transformer	
		Voltage kV, ØAB	M, m
		Current Ø A	M
		Reactive power MX	M, m
XC Shunt			
	Electrical measurements		
		Current A	M
XL			
	Electrical measurements		
		A-phase current	M