

Acronyms and Abbreviations

ac	alternating current	G	giga (10 ⁹)
ACE	area control error	GAO	U.S. Government Accountability Office
AGC	automatic generation control		
AMI	advanced metering infrastructure	GW	gigawatts
AMR	automatic meter reading	GWh	gigawatt hours
BEV	battery electric vehicle	HAN	home-area network
CAES	compressed air energy storage	HEV	hybrid electric vehicle
CEUD	consumer electricity usage data	HTSC	high-temperature superconductor
CIP	Critical Infrastructure Protection	HVDC	high-voltage direct current
CIS	customer information system	Hz	hertz
CREZ	Competitive Renewable Energy Zone (Texas)	ICT	information and communications technologies
CVR	conservation voltage reduction	IEEE	Institute of Electrical and Electronics Engineers
dc	direct current	IOU	investor-owned utility
DG	distributed generation	IP	internet protocol
DHS	U.S. Department of Homeland Security	ISO	independent system operator
DLR	dynamic line rating	k	kilo or thousand (10 ³)
DMS	distribution management system	kV	kilovolt
DOE	U.S. Department of Energy	kVA	kilovolt-ampere
EEI	Edison Electric Institute	kVAR	kilovolt-ampere reactive
EHV	extra-high voltage	kW	kilowatt
EIA	U.S. Energy Information Administration	kWh	kilowatt-hour
EMS	energy management system	LAN	local-area network
ENTSO-E	European Network of Transmission System Operators for Electricity	M	million (10 ⁶)
EPRI	Electric Power Research Institute	MDMS	meter data management system
ERCOT	Electric Reliability Council of Texas	MVA	megavolt-ampere
EV	electric vehicle	MW	megawatt
FACTS	flexible alternating current transmission system	MWh	megawatt-hours
FCC	U.S. Federal Communications Commission	NERC	North American Electric Reliability Corporation
FCL	fault current limiter	NIETC	National Interest Electric Transmission Corridor
FDIR	fault detection, isolation, and system restoration	NIMBY	not in my back yard
FERC	U.S. Federal Energy Regulatory Commission	NIST	U.S. National Institute of Standards and Technology
FIPP	Fair Information Practice Principles	NOAA	U.S. National Oceanic and Atmospheric Administration
FTR	financial transmission right	NWP	numerical weather prediction
		Ofgem	U.K. Office of Gas and Electricity Markets
		OMS	outage management systems

P_{dc}	power output of a direct current source	TEPPC	Transmission Expansion Planning Policy Committee of the Western Electricity Coordinating Council
PHEs	pumped hydro energy storage		
PHEV	plug-in hybrid electric vehicle	UTC	Utilities Telecom Council
PII	personally identifiable information	V	volt
PMU	phasor measurement unit	VA	volt-ampere
PUC	public utility commission	VAR	volt-ampere reactive
PURPA	Public Utility Regulatory Policies Act of 1978	VER	variable energy resource
PV	photovoltaic	VSC	voltage source convertor
PWC	U.S. Power and Energy Engineering Workforce Collaborative	W	watt
RETI	Renewable Energy Transmission Initiative (California)	WAMS	wide-area measurement system
		WAN	wide-area network
rms	root-mean-square	W_{dc}	rated maximum output power of a direct current source
RNM	reference network model		
RPI	Retail Price Index (UK)		
RTO	regional transmission organization		
RTU	remote terminal unit		
SAIDI	system average interruption duration index		
SCADA	supervisory control and data acquisition		
SGDP	Smart Grid Demonstration Projects		
SGIG	Smart Grid Investment Grants		
SIPS	system integrity protection scheme		
SPP	Southwest Power Pool		
SVC	static volt-ampere reactive compensator		