

## List of Abbreviations

<i>Abbreviation</i>	<i>Full Form</i>
3P3W	Three-phase three-wire
3P4W	Three-phase four-wire
AC	Alternating current
AI	Artificial intelligent
ANN	Artificial neural network
APF	Active power filter
APLC	Active power line conditioner
APQC	Active power quality conditioners
AR	Auto-regressive
AUPF	Average unit power factor
BESS	Battery energy storage system
BFO	Bacterial foraging optimization
BIPV	Building integrated PV
CSI	Current source inverter
CWT	Continuous wavelet transform
DC	Direct current
DFIG	Doubly-fed induction generator
DFT	Discrete Fourier transform
DG	Distributed generation
DSSSC	Distribution static synchronous series compensator
DSTATCOM	Distribution static compensator
DT	Decision tree
DVR	Dynamic voltage restorer
DWT	Discrete wavelet transform
EMD	Empirical mode decomposition
ES	Fuzzy expert system
FACTS	Flexible AC transmission system
FCM	Fuzzy C-means
FFT	Fast Fourier transform
FL	Fuzzy logic
FT	Fourier transform
GA	Genetic algorithm
GCPV	Grid-connected solar PV
GSC	Grid side converter
GSD	Grid synchronization device

<i>Abbreviation</i>	<i>Full Form</i>
GT	Gabor transform
GW	Giga watt
GWEC	Global wind energy council
HF	Hybrid filter
HHT	Hilbert Huang transform
HID	Human interface device
IEC	International electro technical commision
IEEE	Institute of electrical and electronics engineers
IG	Induction generator
IGBT	Insulated gate bipolar transistor
IID	Island interconnection device
IMF	Intrinsic mode function
IRP	Instantaneous reactive power
IT	Impulsive transient
KF	Kalman filter
kVA	Kilo volt ampere
LV	Low voltage
MATLAB	Matrix laboratory
MI	Momentary interruption
MOSFET	Metal-oxide semiconductor field effect transistor
MPPT	Maximum power point tracking
MRA	Multi-resolution analysis
MSRF	Modified synchronous reference frame theory
NN	Neural network
OHD	Over complete hybrid dictionary
OLTC	On load tap changer
OT	Oscillatory transient
PCC	Point of common coupling
PEC	Power electronic converter
PF	Power factor
PI	Proportional integral
PLL	Phase locked loop
PNN	Probabilistic neural network
PQ	Power quality
PQI	Power quality index
PR	Proportional resonant
PSO	Particle swarm optimization
PV	Photovoltaics
PWM	Pulse width modulation
QPF	Quasi passive filter

<i>Abbreviation</i>	<i>Full Form</i>
RBDT	Rule-based decision tree
RE	Renewable energy
RMS	Root mean square
RSC	Rotor side converter
RTDS	Real time digital simulator
SC	Symmetrical component
SCIG	Squirrel-cage induction generator
SCR	Silicon controlled rectifier
SMC	Sliding mode control
SMES	Superconducting magnetic energy storage
SNR	Signal to noise ratio
SPV	Solar photovoltaic
SRF	Synchronous reference frame
SSD	Sparse signal decomposition
SST	Substation transformer
ST	Stockwell transform
STA	Stockwell transform amplitude
STATCOM	Static synchronous compensator
STC	Standard test conditions
STFT	Short time Fourier transform
SVC	Static VAR compensator
SVM	Support vector machine
THD	Total harmonic distortions
TPV	Terrestrial PV
TSC	Thyristor switched capacitor
UNE	Spanish association for standardization
UPQC	Unified power quality conditioner
UPS	Uninterrupted power supply
VAR	Volt-ampere reactive
VR	Voltage regulator
VSC	Voltage source converter
VSI	Voltage source inverter
WECS	Wind energy conversion system
WT	Wavelet transform

