Nomenclature

T = Simulation time

* = Superscript denotes optimum value;

J = Cost Index;

M = Inertia constant

D= Damping Constant

T_{DE}= Time Constant of Diesel Generator

K_{DE}= Gain of Diesel Generator

P = Rated Power

ΔP = Incremental change in load

f = Nominal System Frequency

Δf = Incremental Change in Frequency

k = Frequency Bias Constant

K_P = Proportional Gain of Controller

K_I = Integral Gain of Controller

K_D = Derivative Gain of Controller

K_Φ= Gain of the TCPS controller

T_{PS} = Time Constant OF TCPS

$\Delta\Phi$ = Phase Shifter Angle

Abbreviations

DGS	:	Distributed Generation System
AGC	:	Automatic Generation Control
PV	:	Photovoltaic
WTG	:	Wind Turbine Generator
DC	:	Direct Current
AC	:	Alternating Current
ACE	:	Area Control Error
PID	:	Proportional Integral Derivative
ISE	:	Integral Square error
BF	:	Bacteria Foraging
FACT	:	Flexible AC Transmission
TCPS	:	Thyristor Controlled Phase Shifter

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