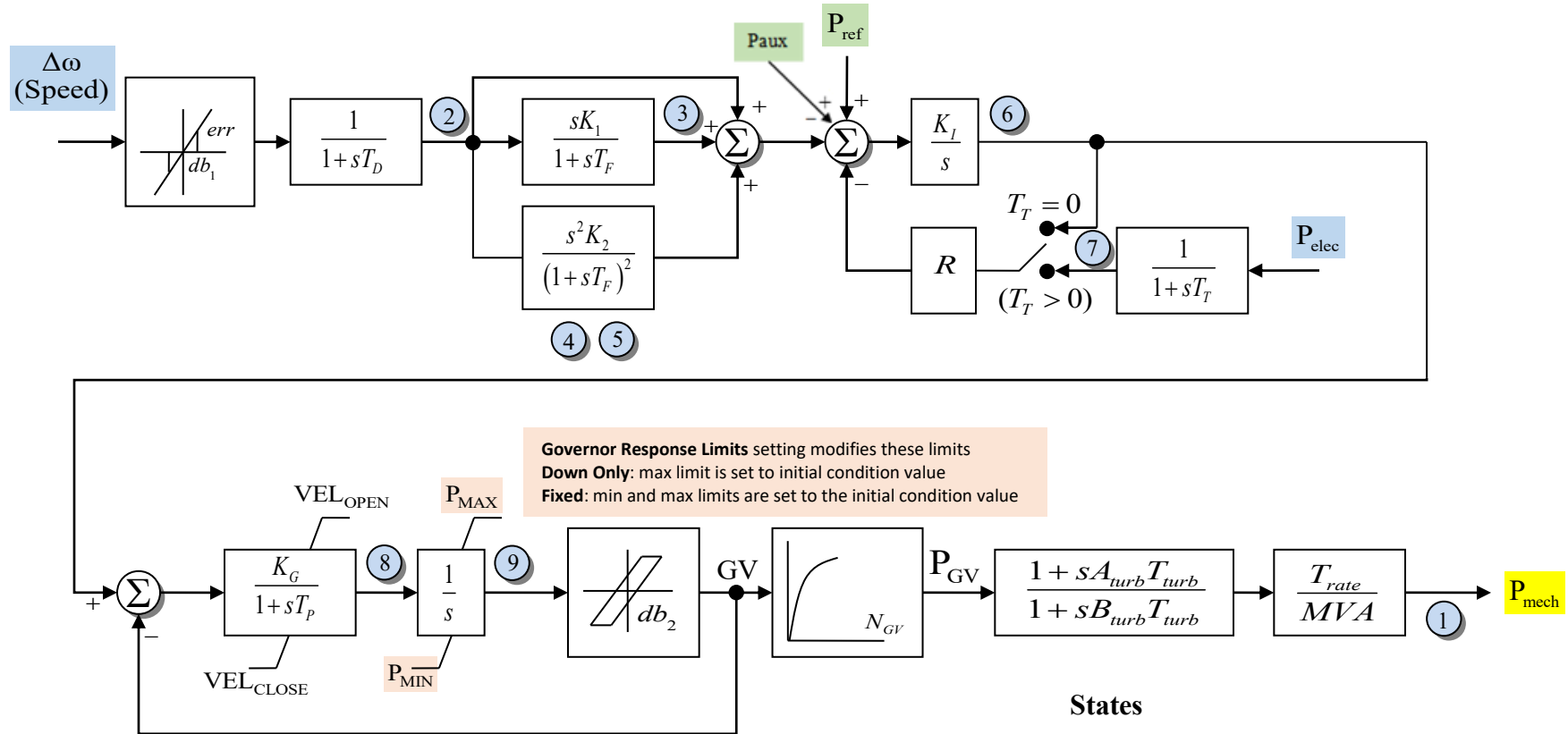


Governor WSHYDD

Governor WSHYDD WECC Double-Derivative Hydro Governor Model



States

- | | |
|------------------|-----------------------|
| 1 - P_{mech} | 6 - Integrator |
| 2 - T_D | 7 - P_{elec} Sensed |
| 3 - K_1 | 8 - Valve |
| 4 - K_2 first | 9 - Gate |
| 5 - K_2 second | |

Model supported by PSSE

Inputs GV1, PGV1...GV5, PGV5 are the x,y coordinates of N_{GV} block

Parameters:

Trate	Turbine rating, MW
db1pu	Intentional deadband width, pu
Err	Intentional db hysteresis, pu
Td	Input filter time constant, sec
K1	Double derivative gain, pu
Tf	Filter time constant, sec
K2	Double derivative gain, pu, if Cflag = -1
Ki	Integral gain, pu
R	Permanent droop, pu
Tt	Power feedback time constant, sec
Kg	Gate servo gain, pu
Tp	Lead time constant, sec
Velopen	Maximum gate opening velocity, pu/sec
Velclose	Maximum gate closing velocity, pu/sec
Pmax	Maximum gate opening, pu of mwcap
Pmin	Minimum gate opening, pu of mwcap
db2pu	Unintentional deadband, pu
Gv1	Nonlinear gain point 1, pu gv
Pgv1	Nonlinear gain point 1, pu power
Gv2	Nonlinear gain point 2, pu gv
Pgv2	Nonlinear gain point 2, pu power
Gv3	Nonlinear gain point 3, pu gv
Pgv3	Nonlinear gain point 3, pu power
Gv4	Nonlinear gain point 4, pu gv
Pgv4	Nonlinear gain point 4, pu power
Gv5	Nonlinear gain point 5, pu gv
Pgv5	Nonlinear gain point 5, pu power
Aturb	Turbine numerator multiplier
Bturb	Turbine denominator multiplier
Tturb	Turbine time constant, sec