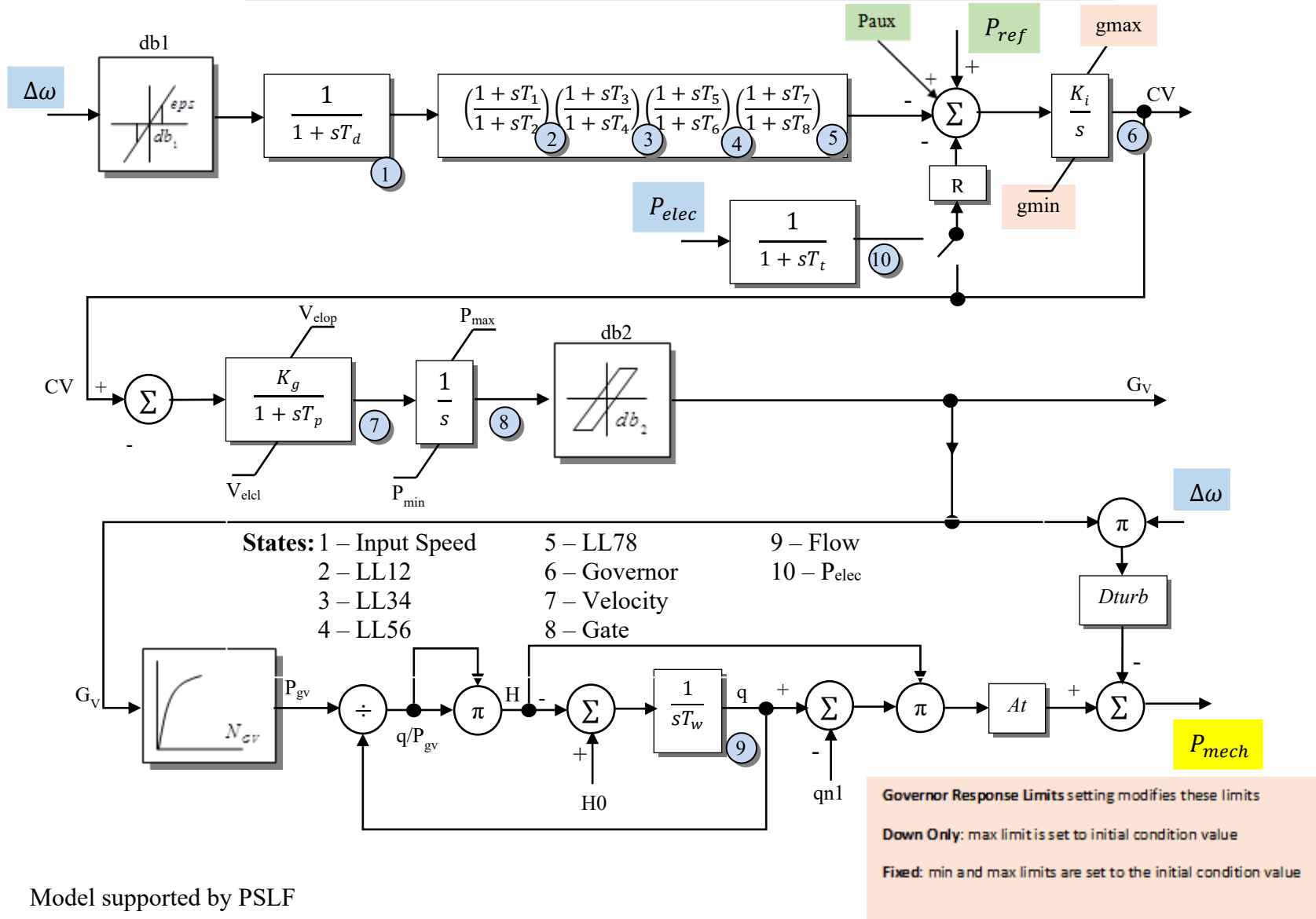


Governor HYGOVR

Fourth Order Lead-lag Governor and Hydro Turbine Model HYGOVR



Model supported by PSLF

Parameters:

Trate	Turbine rating, MW
Pmax	Maximum gate opening, pu of mwcap
Pmin	Minimum gate opening, pu of mwcap
R	Permanent droop, pu
Td	Input filter time constant, sec
T1	Governor mechanism time constant, sec
T2	Turbine power time constant, sec
T3	Turbine exhaust temperature time constant, sec
T4	Governor lead time constant, sec
T5	Governor lag time constant, sec
T6	T, sec
T7	T, sec
T8	T, sec
Tp	Lead time constant, sec
Velopen	Maximum gate opening velocity, pu/sec
Velclose	Maximum gate closing velocity, pu/sec
Ki	Integral gain, pu
Kg	Gate servo gain, pu
Gmax	Maximum gate velocity, pu of mwcap
Gmin	Minimum gate velocity, pu of mwcap
Tt	Power feedback time constant, sec
db1	Intentional deadband width, Hz
Eps	Intentional db hysteresis, Hz
db2	Unintentional deadband, MW
Tw	Water inertia time constant, sec
At	Turbine gain, pu
Dturb	Turbine damping coefficient, pu
Qnl	No-load flow at nominal head, pu
H0	Turbine nominal head, 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
Gv6	Nonlinear gain point 6, pu gv
Pgv6	Nonlinear gain point 6, pu power