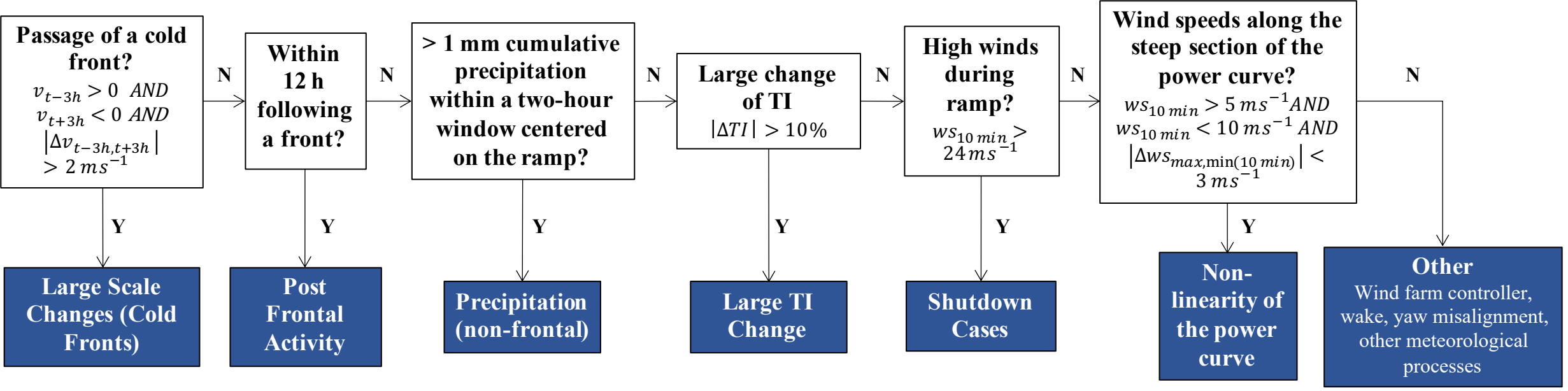
Passage of a cold front?
$v_{t-3h} > 0$ AND $v_{t+3h} < 0$ AND $|\Delta v_{t-3h,t+3h}| > 2\,ms^{-1}$
N
Within 12 h following a front?
N
> 1 mm cumulative precipitation within a two-hour window centered on the ramp?
N
Large change of TI
$|\Delta TI| > 10\%$
N
High winds during ramp?
$ws_{10\,min} > 24\,ms^{-1}$
N
Wind speeds along the steep section of the power curve?
$ws_{10\,min} > 5\,ms^{-1}$ AND $ws_{10\,min} < 10\,ms^{-1}$ AND $|\Delta ws_{max,\min(10\,min)}| < 3\,ms^{-1}$
N
Y
Large Scale Changes (Cold Fronts)
Y
Post Frontal Activity
Y
Precipitation (non-frontal)
Y
Large TI Change
Y
Shutdown Cases
Y
Non-linearity of the power curve
Other
Wind farm controller, wake, yaw misalignment, other meteorological processes