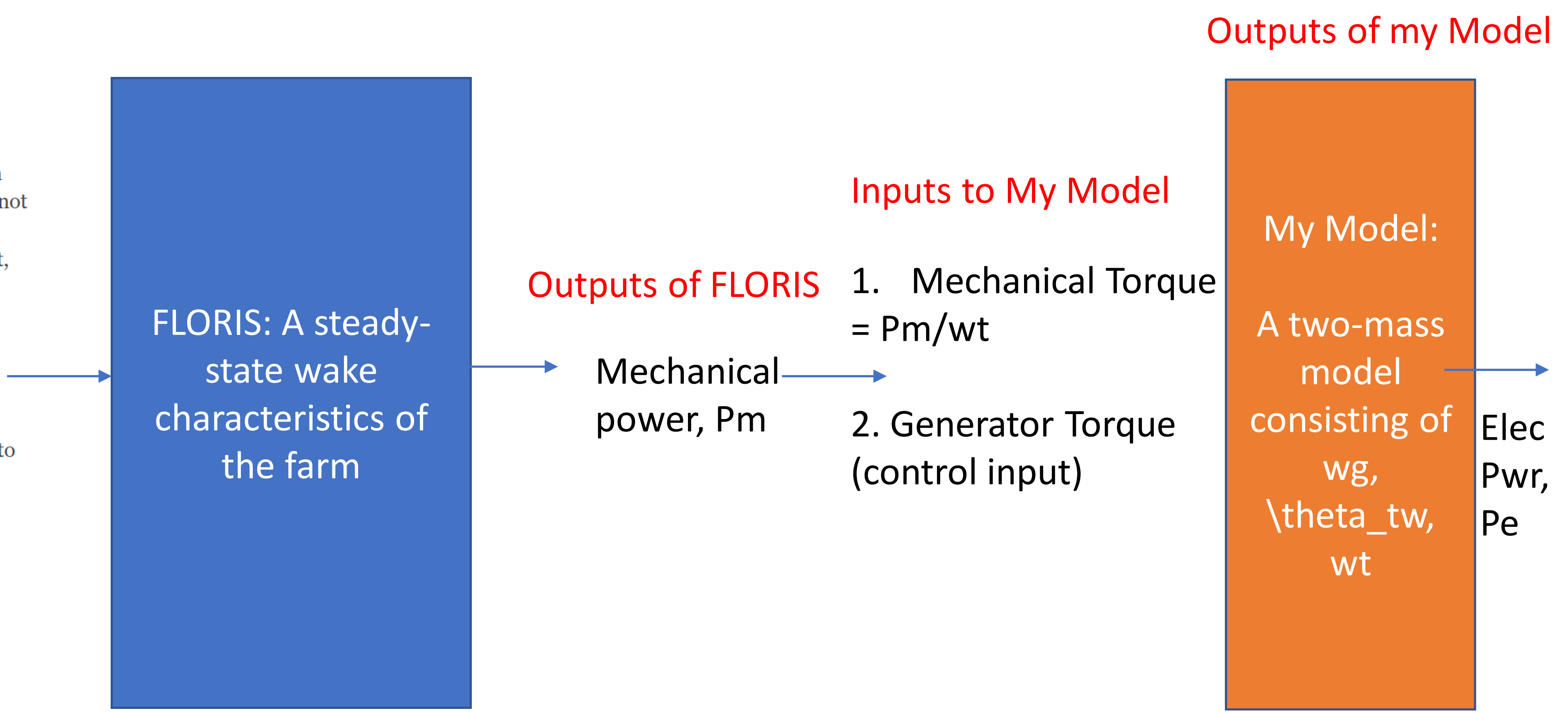
Inputs to FLORIS

- **blade_count**: The number of blades on the turbine.
- **pP**: Exponent used on the cosine power loss due to yaw.
- **pT**: Exponent used on the cosine power loss due to tilt.
- **generator_efficiency**: The generator efficiency used in calculating power. If the Cp (`power`) data is electrical and not aerodynamic, then set `generator_efficiency = 1.0`.
- **power_thrust_table**: Sub-dictionary containing Cp, Ct, and wind speed data.
    - **power**: A list of Cp values that correspond to the Ct (`thrust`) and `wind_speed` data.
    - **thrust**: A list of Ct values that correspond to the Cp (`power`) and `wind_speed` data.
    - **wind_speed**: A list of wind speeds that correspond to the Cp (`power`) and Ct (`thrust`) data.
- **blade_pitch**: The pitch of the turbine blades to run the simulation at. Not currently implemented; planned for future use.
- **yaw_angle**: The initial yaw angle for all the turbines (degrees).
- **tilt_angle**: The tilt angle of the rotor (degrees).
- **TSR**: The tip-speed ratio of the turbine.



How do we do generator torque control with this augmented model?

- My idea:

1. Let TSR be the control handle
2. Then, GenTorque input to my model is

   $Te = Kopt\ wg^2$

Where Kopt can be computed as $0.5\ rho\ A\ R^3\ Cp(TSR,beta)/TSR^3$

3. Cost function = sum(Pe_i), i = 1,2,….. No. of Turbines