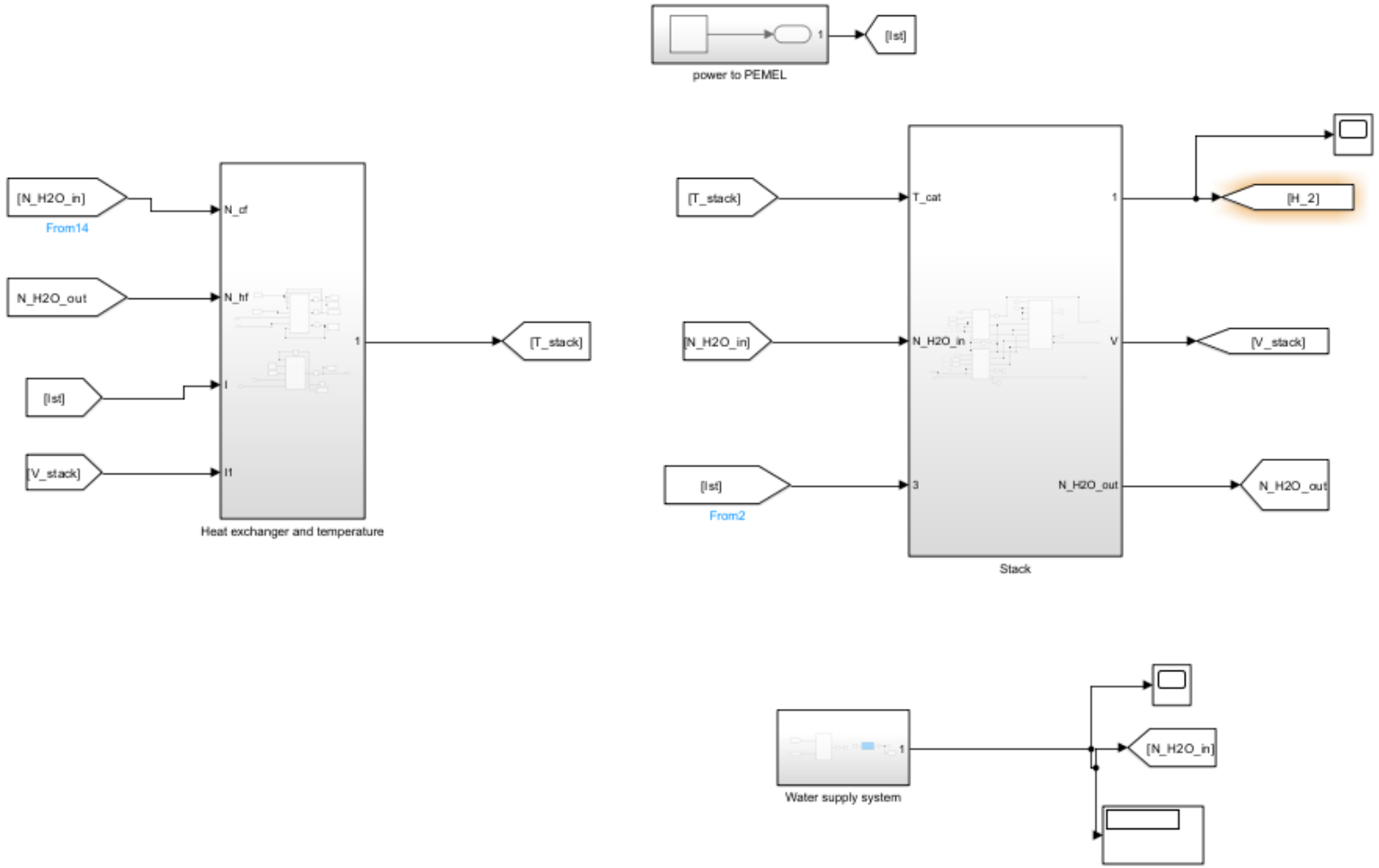


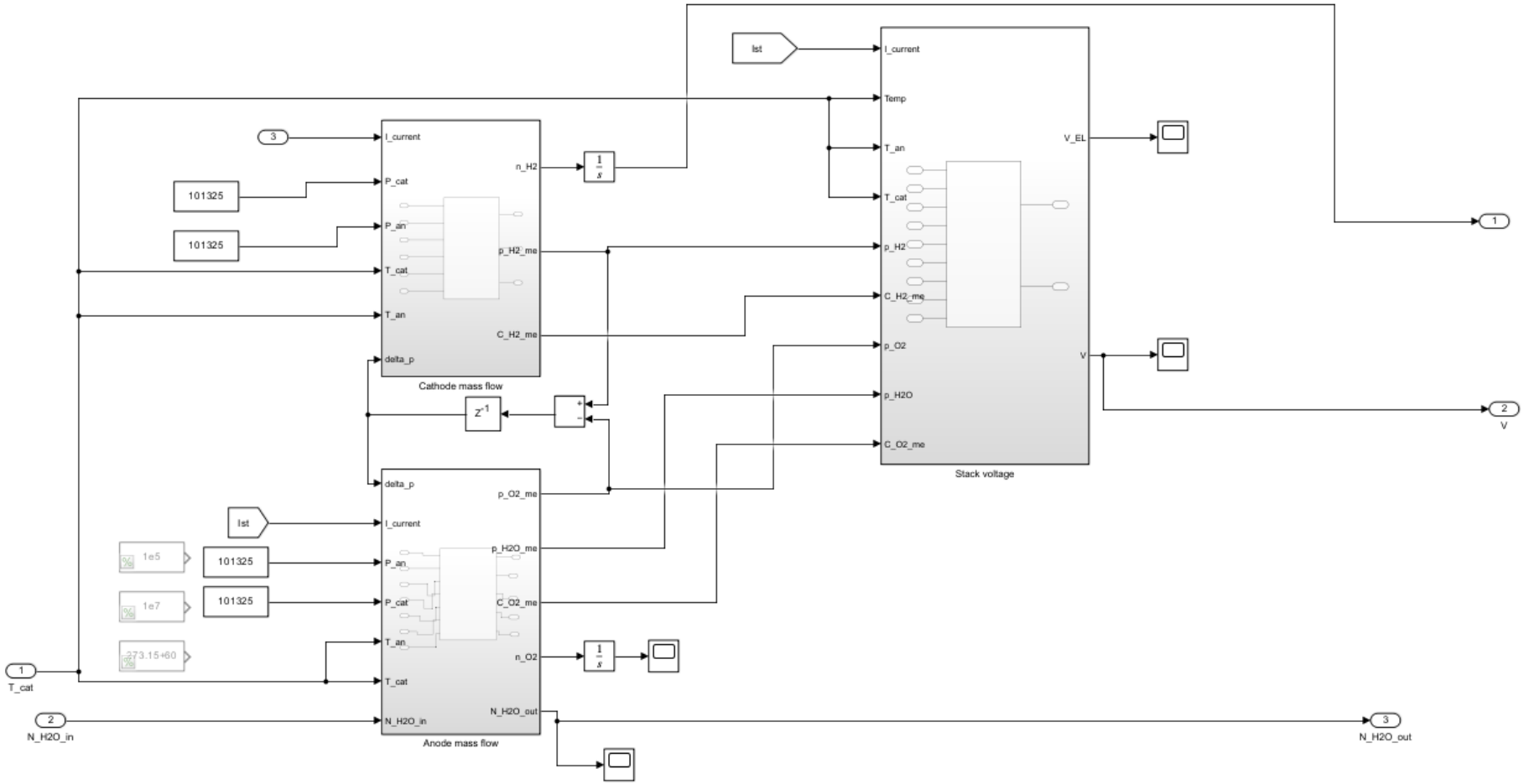
Electrolyser system model:

Stack model
Water supply system
Heat exchange and thermal

Stack model

Input: stack current, stack temperature, water flow rate

Output: Stack voltage, generated hydrogen



Heat exchanger model

Heat exchanger block:

The stack generated water is in high temperature, it is then transferred back to the heat exchanger to re-heat the input water

Input: molar flow in cold tube, hot tube, and environmental temperature

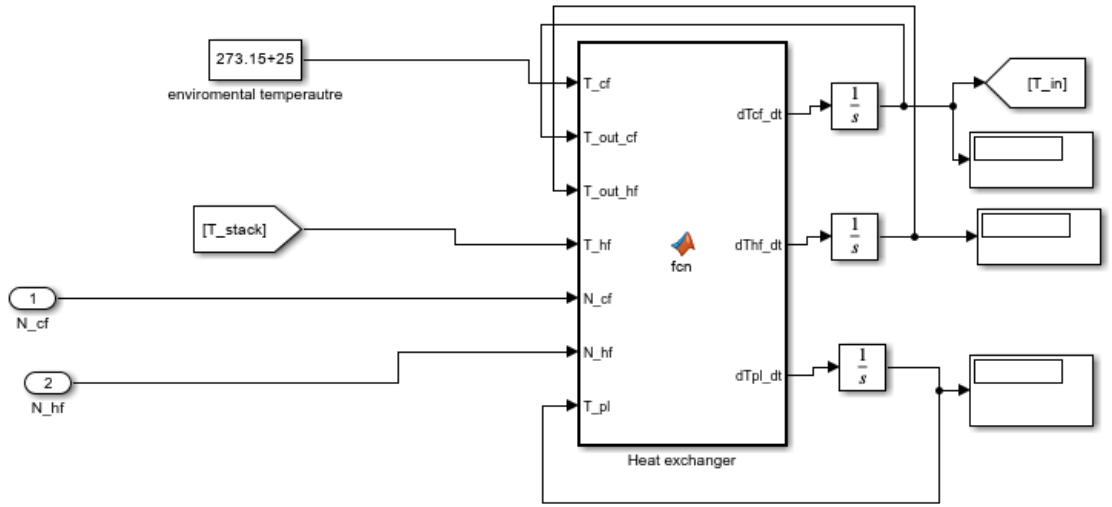
Output: Stack input temperature

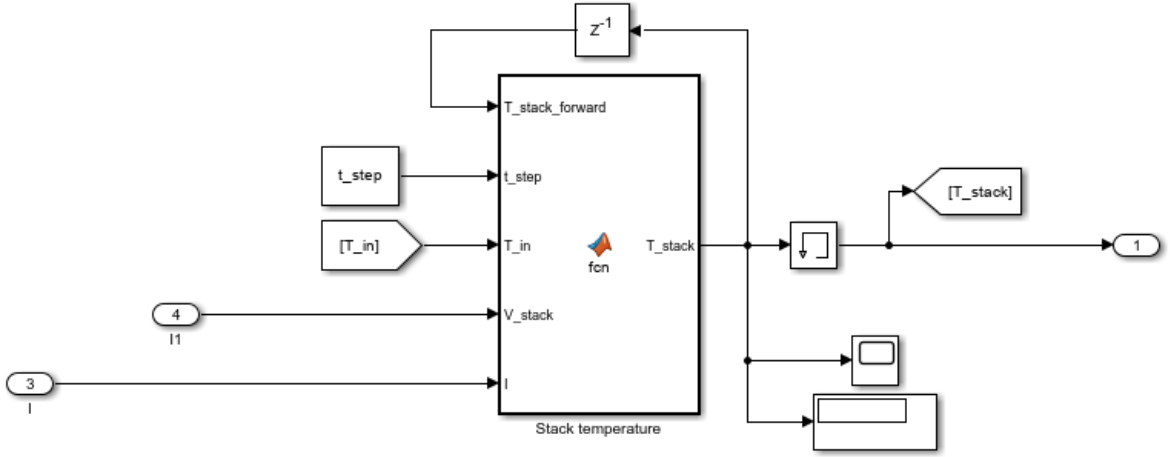
Stack temperature calculation block:

Calculate the stack temperature

Input: Stack input temperature, output voltage of stack and current

Output: Stack temperature





Water supply model

Water tank:

Calculate the remaining water in tank

Input: output water, water back from stack

Output: remaining water in the tank

Water pump:

Input: reference of the output water flow

Output: Output water from the tank