

```

function [ybus, BMatrix, E, PSpecified, QSpecified, V, delta,
listOfPQBuses, listOfPVBuses, nPQ, nPV, listOfNonSlackBuses] =
generateYBusForType2(useReducedLoadsForPowerFlow, busData, busDataReducedLoads,
branchData, MVAAb)
    if useReducedLoadsForPowerFlow
        [ybus, BMatrix, ~, ~, ~, E] = ybusGenerator(busDataReducedLoads,
branchData); %#ok<*UNRCH>

        [PSpecified, QSpecified, V, delta, ...
listOfPQBuses, listOfPVBuses, nPQ, nPV, ...
listOfNonSlackBuses] = initializeVectors(busDataReducedLoads, MVAAb);
    else

        [ybus, BMatrix, ~, ~, ~, E] = ybusGenerator(busData, branchData);

        [PSpecified, QSpecified, V, delta, ...
listOfPQBuses, listOfPVBuses, nPQ, nPV, ...
listOfNonSlackBuses] = initializeVectors(busData, MVAAb);
    end
end

```