

```

function [PG, QG] = generateSymbolicPowerFlowEquations(nPV, PG, QG, yGen,
E_primeVals, EdgesGen, theta)
    for i = 1:nPV+1
        PG(i) = real( yGen(i, i) ) * E_primeVals(i)^2;
        QG(i) = -imag( yGen(i, i) ) * E_primeVals(i)^2;
        for k = EdgesGen{i}
            PG(i) = PG(i) + abs(yGen(i, k)) * E_primeVals(i) * E_primeVals(k) *
cos( angle(yGen(i, k)) + theta(k) - theta(i) );
            QG(i) = QG(i) - abs(yGen(i, k)) * E_primeVals(i) * E_primeVals(k) *
sin( angle(yGen(i, k)) + theta(k) - theta(i) );
        end
    end
end
end

```