PROGRAM:

```
clc;
clear all;
n=input('Enter no of generating stations:');
Pd=input('Enter load demand:');
for i=1:n
   a(i)=input('Enter coefficient of Pi^2:');
   b(i)=input('Enter coefficient of Pi:');
   c(i)=input('Enter constant:');
   Pmin(i)=input('Enter min power gen:');
   Pmax(i)=input('Enter max power gen:');
end;
Nr=0;
Dr=0;
for i=1:n
   Nr=Nr+(b(i)/(2*a(i)));
   Dr=Dr+(1/(2*a(i)));
end
lambda=(Pd+Nr)/Dr;
for i=1:n
   Pg(i)=(lambda-b(i))/(2*a(i));
end;
Pg
for i=1:n
   if(Pg(i)>Pmax(i))
      Pg(i)=Pmax(i);
      Nrnew=0;
      Drnew=0;
      for j=1:n
         if(j~=i)
            Nrnew=Nrnew+(b(j)/(2*a(j)));
            Drnew=Drnew+(1/(2*a(j)));
         end
      end
      lambdanew=(Pd-Pg(i)+Nrnew)/Drnew;
      for k=1:n
         if(k~=i)
            Pg(k)=(lambdanew-b(k))/(2*a(k));
         end
      end
   end
end
Pg
```

OUTPUT:

```
Enter no of generating stations:3
Enter load demand:850
Enter coefficient of Pi^2:0.00128
Enter coefficient of Pi:6.48
Enter constant:459
Enter min power gen:150
Enter max power gen:600
Enter coefficient of Pi^2:0.00194
Enter coefficient of Pi:7.85
Enter constant:310
Enter min power gen:100
Enter max power gen:400
Enter coefficient of Pi^2:0.00482
Enter coefficient of Pi:7.97
Enter constant:78
Enter min power gen:50
Enter max power gen:200

Pg =

  705.1467  112.1587   32.6946


Pg =

  600.0000  187.1302   62.8698
```