



Faculty of Engineering and Technology
Electrical and Computer Engineering Department
Power system(ENEE 4403)
Assignment #1
Load Profile curves at Differences cases

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Section 1.

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The Code:

```
%Anas Tomazieh 1152325. power system Assignment #1
%Define the Parameters.
l=0:0.01:1000;%Length of the T.L
Vs=1000;%Voltage sending
b=0.001234;%phase constant
Zc=260;%SIL
VR=500;%Voltage reseving
IR=4;%Current receving.
Vstr=Vs;
plot([min(0) max(1000)], [Vstr Vstr], 'LineWidth',3);%Case one SIL
hold on
Vrnl=Vs./cos(1000*b);%voltage receving at no load
Vnl=cos(b*l).*Vrnl;%no load voltage
plot(l,Vnl, 'LineWidth',3);%Case two no-load
set(gca, 'XDir','reverse');%reverse th axes 6000-0.
hold on
Ipsc=Vs./(sin(1000*b));%short CKT current receving
Vsc=sin(b*l).*Ipsc;
plot(l,Vsc, 'LineWidth',3);%Case three short CKT load
set(gca, 'XDir','reverse');
Vfl=cos(b*l).*VR+1j*Zc*sin(b*l).*IR;%full load voltage
Vfl=abs(Vfl);
plot(l,Vfl, 'LineWidth',3);%Case four-full load
set(gca, 'XDir','reverse');
hold on
xlabel('length of the T.L');
ylabel('V(x)');
title('Voltage Profile of lossless line with fixed sending end voltage');
```

The result:

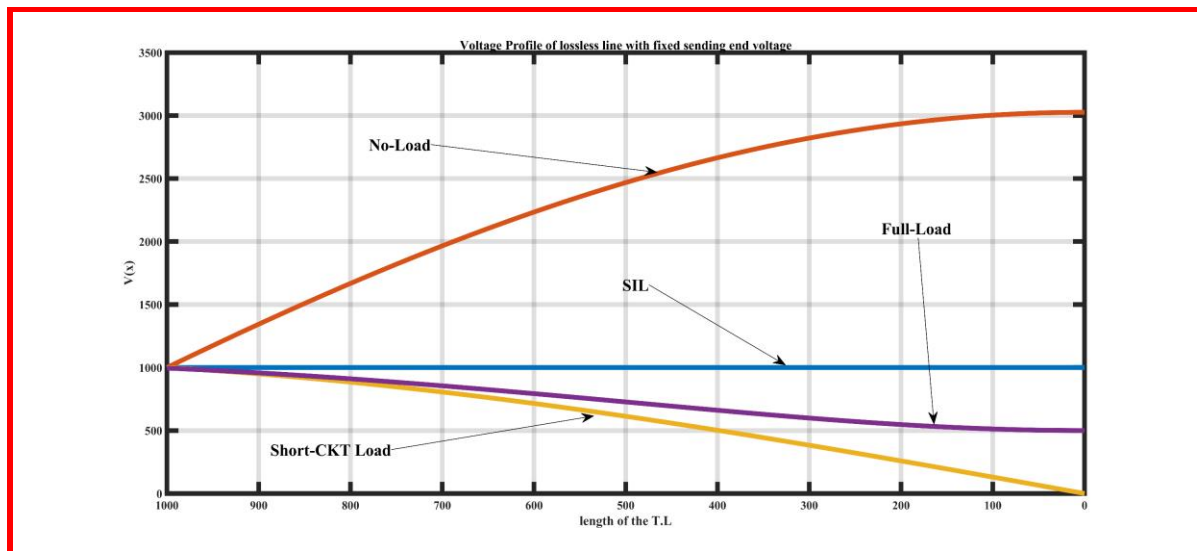


Figure 1: Plot of load profile at difference cases