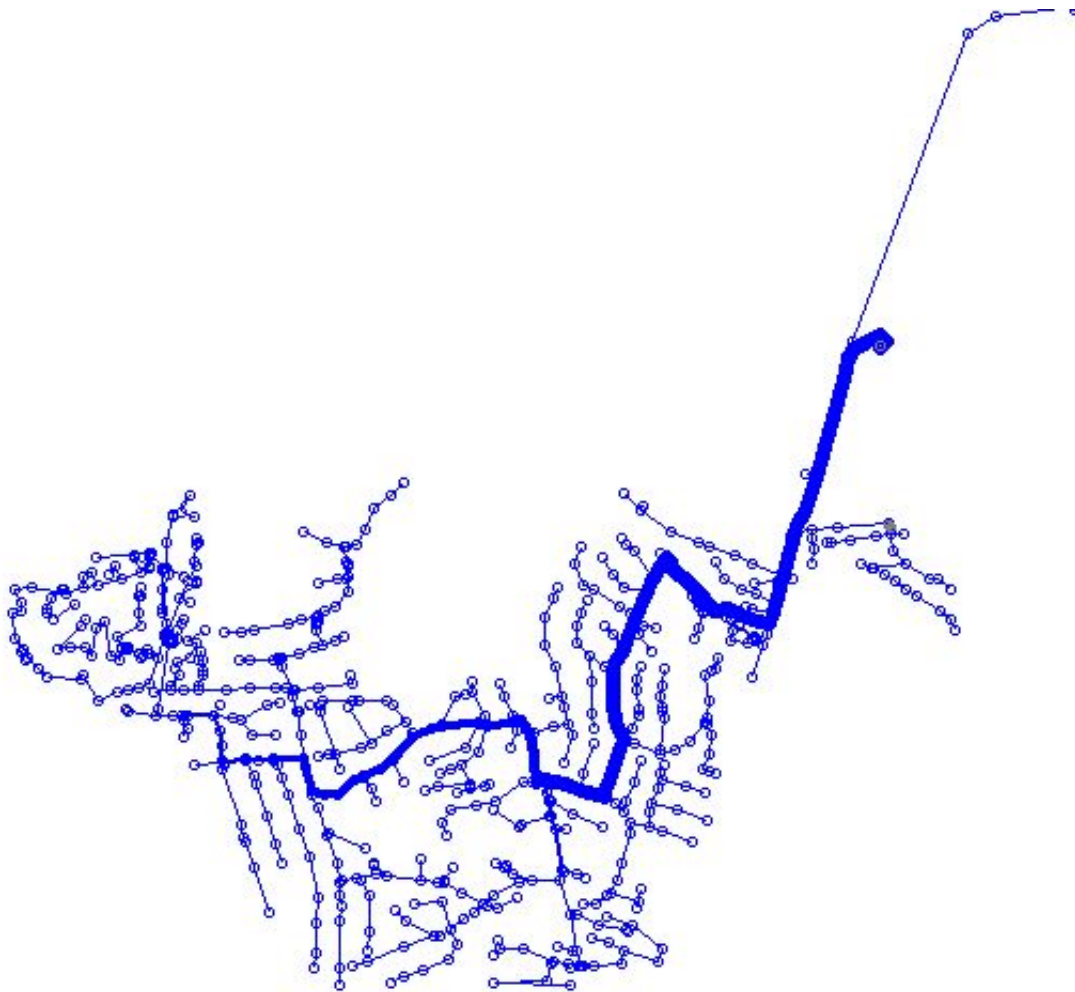


Bus Coordinates

From OpenDSSWiki

If you define the bus coordinates, the OpenDSS can create circuit diagrams like the one below through the *Plot Circuit* command. See help on the Plot command in the program. There is also a section in the Users Manual on some aspects of plotting.



Here is a snippet from the bus coordinate file used to generate this picture :

```
N1281316,11894731.7357567,4197454.61149251
N803916,11889166.8368259,4191218.12266468
N803934,11889172.6049164,4191368.65538736
N803973,11889179.3419549,4191671.84618535
N803991,11888721.2904665,4191769.9645205
N804007,11889192.7223036,4191921.63084902
N804035,11888875.825641,4192170.328771
N804041,11888573.6037911,4192204.52313619
N804043,11889387.0172781,4192251.83059776
N804045,11888842.7015518,4192255.4100057
N804048,11889107.2864213,4192321.93050299
```

```
N804056,11888780.172107,4192445.94824842
N804057,11888486.8709117,4192464.82816869
```

The format for the DSS is simply:

```
< Bus name>, <X>, <Y>      (one to a line)
```

You can use white space instead of commas:

```
< Bus name>      <X>      <Y>
```

Then you can simply issue the command:

```
Buscoords myfilename.csv
```

The DSS does not need graphical bus coordinates to do its basic circuit calculations. You do not have to define bus coordinates. However, if you supply coordinates, it will draw circuit diagrams for you in a multitude of ways. (Some users bypass the DSS facilities and draw their own pictures with R , MATLAB, Excel, or Python using the COM interface in OpenDSSEngine.DLL).

The only trick is to wait until the OpenDSS has established a bus list before you define the bus coordinates. The bus list does not exist until some action is taken that requires it. If the bus list does not exist, it ignores the definition. I recommend doing this after the first Solve command. You can also issue MakeBusList to force the building of the bus list, but Solve does it too.

Here is the script that generated the above plot

```
Compile (C:\Projects\EPRI\GreenCircuits\DOMPHEV_ver2\Master.dss)
vsource.source.pu=1.05
Solve
Buscoords Buscoords.txt
plot circuit Power max=5000 y n C1=$00FF0000
```

You may add or change bus coordinate definitions any time after they are first created.

Modified --Rdugan 02:40, 30 August 2010 (UTC)

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