

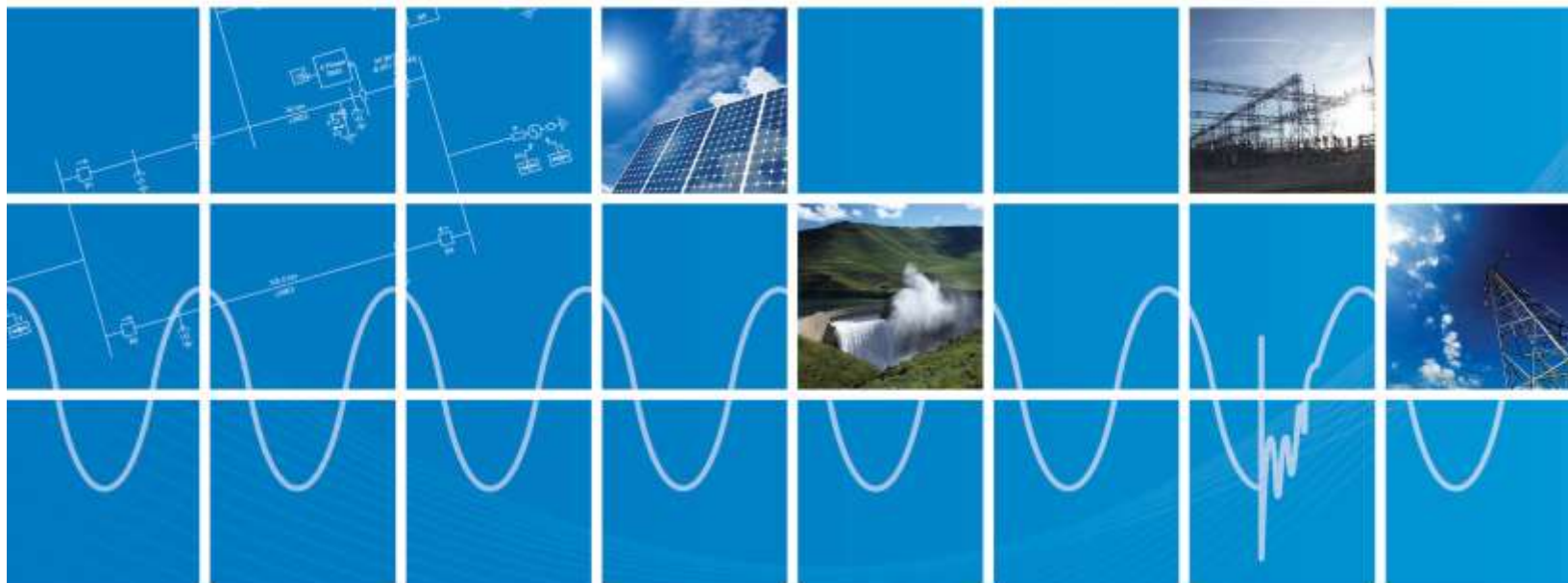


## FDNE Application Example 2

For PSCAD Version 5.0.0

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Initial



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## 1. OVERVIEW

In this simple application example project called *simple\_network\_V5.pscx*, the RLC network in Figure 1 is represented using a Frequency-Dependent Network Equivalent (FDNE) and then compared with the original RLC network. The boundary buses are 1 and 2.

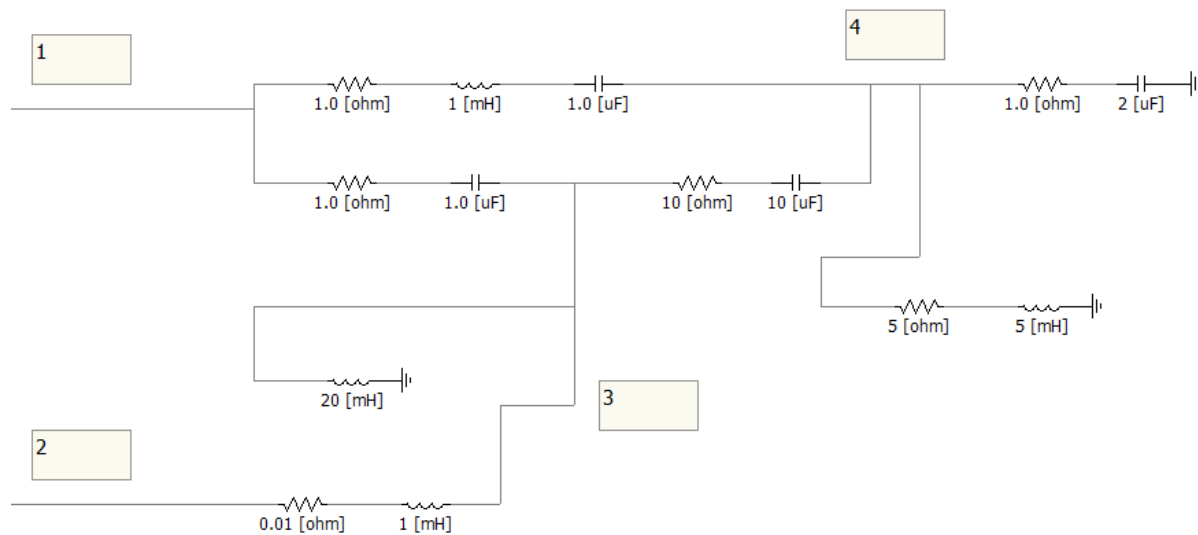


Figure 1: The RLC Network

The network is represented in the following text files, each with different data formats:

File name	Data format
Z1.txt	Impedance Parameters
Y1.txt	Admittance Parameters
S1.txt	Scattering Parameters
ABCD1.txt	Admittance as ABCD Parameters
SABCD1.txt	Scattering as ABCD Parameters



## 2. FDNE MODEL INPUT DATA FILE FORMAT

*Addition is only sequence parameters, help is already there for other types of data inputs. See the FDNE component topic in the PSCAD Application Help (right-click on the FDNE component and select **Help**).*

### The Sequence Parameters

The input data file contains sequence impedances for three-phase system (i.e. only for three port),

The file format is:

Frequency (Hz), real(Z1), imag(Z1), real(Z0), imag(Z0) ! Note that Z1 and Z0 are sequence parameters in ohms.

Example:

```
20.0, 2.395, 23.124, 1.83, 32.144  
50.0, 4.355, 33.114, 1.34, 68.145
```



DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	6/May/2020