TechNote Load Model 8

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Load model 8 has been added to allow specification of standard ZIP models.

Valid Load Model Codes

Integer code for the model to use for load variation with voltage. Valid values are:

1:Standard constant P+jQ load. (Default)
2:Constant impedance load.
3:Const P, Quadratic Q (like a motor).
4:Nominal Linear P, Quadratic Q (feeder mix). Use this with CVRfactor.
5:Constant Current Magnitude
6:Const P, Fixed Q
7:Const P, Fixed Impedance Q
8:ZIPV (7 values)

For Types 6 and 7, only the P is modified by load multipliers.

ZIPV Property Definition

Array of 7 coefficients for ZIPV property for Model=8:

First 3: ZIP weighting factors for active (real) power (should sum to 1)

Next 3: ZIP weighting factors for reactive power (should sum to 1)

Last 1: Cut-off voltage in pu of base kV; **load is 0** below this value; assumes load disconnects (motor contacts open, etc.).

No defaults: all coefficients must be specified if using model=8.

Example

```
clear
new circuit.loadtest basekV=1 phases=1 pu=1.0 bus1=src
new line.bus bus1=src bus2=load phases=1 rmatrix=(0.00001) xmatrix=(0) cmatrix=(0)

new load.zipv   bus1=load kW=1 pf=0.88 phases=1 kV=1 model=8 vminpu=0.0 vmaxpu=1.2
~ zipv=(0.855,-0.9855,1.1305,2.559,-2.963,1.404,0.87)
```

```
new load.constp bus1=load kW=1 pf=0.88 phases=1 kV=1 model=1 vminpu=0.8 vmaxpu=1.1
new load.constz bus1=load kW=1 pf=0.88 phases=1 kV=1 model=2 vminpu=0.8 vmaxpu=1.1
new load.consti bus1=load kW=1 pf=0.88 phases=1 kV=1 model=5 vminpu=0.8 vmaxpu=1.1
new load.yville bus1=load kw=1 pf=0.88 phases=1 kv=1 model=4 cvrwatts=0.7 cvrvars=2.0
new load.grnckt bus1=load kw=1 pf=0.88 phases=1 kv=1 model=4 cvrwatts=0.8 cvrvars=3.0
solve
```

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