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# PowerSimulator Basecase Formats

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## Name

PsmCaseOverview — PowerSimulator Basecase Formats

## PowerSimulator Basecase Formats Overview

PowerSimulator Basecase Formats describe a set of comma-separated-value (CSV) files used to transfer the state of an electrical model previously described with PowerSimulator Model Formats.

A separate CSV file is used for each of the object types below. If no objects exist for a given type, that CSV file can be omitted. The first line of each CSV file is a header containing the attribute names for that object as described in this documentation, and each object of that type is written to the file in the subsequent lines.

## Usage Guidelines

- Only include information that is actually available from the source data. Any unused attributes can be left blank. If no object in a CSV file uses an attribute, that entire column can be omitted.
- Avoid invented data.
- There can be one file per object type, and the filenames must be exactly as documented.
- Object ID strings must be those previously described in a model transfer using the PowerSimulator Model Formats.
- The import mechanism relies on the name, not the order of the columns.
- Attributes within each file must be spelled exactly as documented.
- Attributes within each file can appear in any order.

### Revision History

Revision 1.8 August 28, 2014

Remove device characteristics from case for SVC (slope, var limits)

Remove device characteristics from case for PhaseTapChanger (var limits), and add optional continuous shift value

Remove device characteristics from case for RatioTapChanger (var limits), and add optional continuous ratio

Revision 1.7 June 4, 2013

rename AreaLoadCurve to LoadAreaCurve to support new LoadArea records

Revision 1.6 May 28, 2013

Add area load curve

Revision 1.5 Apr 25, 2013

Add case MVar to synchronous machine

Revision 1.4 Apr 18, 2013

Remove RegulatingKV since it is a duplicate of AVRMode for synchronous machine .

Revision 1.3 Apr 17, 2013

Correct synchronous machine operating mode description.

Revision 1.2 Nov 19, 2012

Add ACE control mode to Control Area record. Add PsmCaseParameter.csv to allow transfer of case metadata such as name, description, and timestamp

Revision 1.1 May 4, 2012

Add kv shunt to synchronous machine, add shunt capacitor and shunt reactor

Revision 1.0  
Initial Revision

April 25, 2012

## Name

PsmCaseParameter.csv — File definition for PsmCaseParameter.csv

## Description

This file allows for general parameter / value pairs. The file should have two columns described in the "Attributes" section below. Recognized parameters are described in the second section

### Attributes

ParameterName      Parameter Name

ParameterValue      Parameter Value

### Allowed Parameters

CaseFormatVersion      Version of PowerSimulatorCaseFormat used.

CaseName              Name of case

CaseDescription        Case description

CaseTimestamp        Timestamp of case used. Format is YYYY-MM-DD HH:MM:SS Z

YYYY    Year

MM      Month

DD      Day

HH      Hour

MM      Minutes

SS      Seconds

Z        timezone name, abbreviation or offset from UTC

## Name

PsmCaseControlArea.csv — File definition for PsmCaseControlArea.csv

## Description

Base case information for Control Area measurements

### Attributes

ID	Control Area ID
NetInterchange	Area net interchange (MW)
ACEControlMode	ACE Control Mode <ul style="list-style-type: none"><li>• TieLineBias</li><li>• ConstantNetInterchange</li><li>• ConstantFrequency</li></ul>

## Name

PsmCaseLoadAreaCurve.csv — File definition for PsmCaseLoadAreaCurve.csv

## Description

Base case information for Load Area Curves. A curve requires the Load Area MW to be defined at each 5-minute interval for a 24-hour period, or 288 intervals unless the LoadArea has been defined as nonconformin.

Nonconforming LoadAreas can provide a single entry to define the total load.

### Attributes

LoadArea	ID of load area
Interval	Interval number (1-288)
AreaLoad	MW for interval

## Name

PsmCaseLoad.csv — File definition for PsmCaseLoad.csv

## Description

Base case information for Load Devices

### Attributes

ID	Load ID
MW	Load MW
MVAr	Load MVAr

## Name

PsmCaseGeneratingUnit.csv — File definition for PsmCaseGeneratingUnit.csv

## Description

Base case information for Generating Unit measurements

### Attributes

ID	Generating Unit ID
MW	Generator Output MW
GeneratorOperatingMode	Generator Operating Mode
	<ul style="list-style-type: none"><li>• OFF</li><li>• MAN</li><li>• AGC</li><li>• EDC</li><li>• LFC</li></ul>



## Name

PsmCaseSynchronousMachine.csv — File definition for PsmCaseSynchronousMachine.csv

## Description

Base case information for Synchronous Machine

### Attributes

ID	Synchronous Machine ID
SynchronousMachineOperatingMode	SynchronousMachine Operating Mode <ul style="list-style-type: none"><li>• GEN</li><li>• CON</li><li>• PMP</li></ul>
AVRMode	Automatic Voltage Regulation mode <ul style="list-style-type: none"><li>• ON</li><li>• OFF</li></ul>
KVSetPoint	KV Setpoint if regulating KV is enabled (AVR Mode = ON)
MVArSetpoint	MVAr setpoint used if regulating MVAr (AVR Mode = OFF)
MVAr	case MVAr

## Name

PsmCaseShuntCapacitor.csv — File definition for PsmCaseShuntCapacitor.csv

## Description

Base case information for Shunt Capacitor

### Attributes

ID	Shunt Capacitor ID
Enabled	KV regulation enabled? true or false

## Name

PsmCaseShuntReactor.csv — File definition for PsmCaseShuntReactor.csv

## Description

Base case information for Shunt Reactor measurements

### Attributes

ID	Shunt Reactor ID
Enabled	KV regulation enabled? true or false

## Name

PsmCaseSVC.csv — File definition for PsmCaseSVC.csv

## Description

Base case information for SVC measurements

### Attributes

ID	SVC ID
Mode	<ul style="list-style-type: none"><li>• Volt</li><li>• MVar</li></ul>
MVarSetpoint	SVC MVar Setpoint.
VoltageSetpoint	SVC Voltage Setpoint.

## Name

PsmCaseRatioTapChanger.csv — File definition for PsmCaseRatioTapChanger.csv

## Description

Base case information for Ratio TapChanger Devices

### Attributes

ID	Tap Changer ID
TapPosition	Tap position.
LTCEnable	Has LTC Enabled (true / false)
Ratio	tap ratio at the given position in per-unit on bus base KV (optional)

## Name

PsmCasePhaseTapChanger.csv — File definition for PsmCasePhaseTapChanger.csv

## Description

Base case information for Phase TapChanger Devices

### Attributes

ID	Phase Tap Changer ID
TapPosition	Tap position.
ControlStatus	Control enabled? (true / false)
PhaseShift	Phase shift at the given tap position in degrees (optional)

## Name

PsmCaseSwitch.csv — File definition for PsmCaseSwitch.csv

## Description

Base case information for Switch Devices

### Attributes

ID	Switch ID
SwitchPosition	Switch Position. <ul style="list-style-type: none"><li>• Open</li><li>• Closed</li></ul>