This document explains step by step how the script "Wind Speed Sweep" from the PowerFactory example project "Wind Farm" can be used with other projects. For this the script "Wind Speed Sweep" is needed plus a wind speed dependent power characteristic. The characteristic consists of a scale (the x-axis) and the characteristic itself (y-axis values).



1. Copy the script to project:

2. Copy the scale for the wind speed (or create new):



3. Copy the "Power Curve WTG" characteristic:



4. Right click in the Active Power filed and select the characteristic:

Static Generator - Wind_speed_	sweep\wild Siviw.EimGenstat				
Basic Data	General Operational Limits A	dvanced Automatic Dispatch			
Load Flow	Reference Machine	Loca	al Controller Const. Q	~	
VDE/IEC Short-Circuit	External Secondary Controller	* *			
Complete Short-Circuit	External Section Controller				
ANSI Short-Circuit	External Station Controller	· · · · · · · · · · · · · · · · · · ·			
IEC 61363					
DC Short-Circuit					
RMS-Simulation	Dispatch		Actual Dispatch		
EMT-Simulation	Input Mode P, Q	× '	Active Power (act.) 5, MW Reactive Power (act.) 0 Mvar		
Harmonics/Power Quality	Active Power \$,	MIM	American charter (act.) 5, MVA		
Optimal Power Flow	Reactive Power 0,	Add Global Characteris	tic > lact) 1	ind	
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Concention Adamsons	Angle V,	Delete Characteristic(s)	Scaling Factor		
Generation Adequacy	Prim. Frequency Bias 0,	MW/Hz	Linear Function		
Description	Scaling Factor 1,		One Dimension - Ve	actor	
			Two Dimension - M	latrix	
			Characteristic from	File	
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5. Repeat the step for all other generators or use the detailed view with copy&paste (The scales tab is only visible if the scales function was enabled in the user settings (Tools → User Settings → Functions):



6. Double check if the wind speed trigger is now available:



7. Define a feeder with orientation into the wind farm (Orientation "busbar" in this case):

	· · · ·					
Edit Cubicle	ĺ					
Switch Off Remove Switch						
New Devices Edit Devices	`					
Define	>	Switch Event				
Edit Add to	>	Short-Circuit Event Results for RMS/EMT Simulation				
Create Textbox for Device Create Textbox for Cubicle		Results for Harmonic Load Flow Results for Frequency Sweep				
Disconnect Element Reconnect Element		Results for Quasi-Dynamic Simulation Mutual Data				
		Feeder				
 		Zone 45				

8. Execute the script:

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		 (€) (€) 	VerifyDistParamsModel Wind Speed Sweep				· · ·

9. Configure the script, select the feeder from the Feeders folder



10.	And the trigger "Wind Speed" from the active study case, execute then the script:
	DPL Command - Study Cases\Study Case\Wind Speed Sweep.ComDpl *

OPL Command - Stud	y Cases\Study Case\Wind Sp	eed Sweep.ComDpl *			? ×
Basic Options	Name	Wind Speed Sweep]	Execute
Results	General Selection	▼ →			Close
Script	Input parameters:				Creat
Description	Туре	Name Valu	e Unit	Description	Cancel
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11. Create new page:

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12. Add a new plot:

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13. Double click at the plot and select the result file of the script:

SubPlot - Study Case	s\Study Case\Graph	ics Board\Wind Speed	Sweep\Subplot.VisP	lot		? ×			
y-Axis	Name	Subplot				ОК			
x-Axis	Scale					Cancel			
Advanced	🔽 Use lo	cal Axis	Scale			Define Results			
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				4 14	1 Wind Speed Sweep				

14. Select as Element the script and the power as variable:

	Result File ElmRes,In	Element	Variable	Colo	Style	Width	Variable Des	Nc		
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SubPlot - Study Cases	\Study Case\Graphics Board\Wind Spe	ed Sweep\Subplot.VisPlot *		? ×
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x-Axis	Scale			Cancel
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	Variable	b:v_wind		
	User defined Legend			
	Show direction arrows for cu	Jrves		

15. Go to the x-Axis page and enter the following configuration:

16. Auto scale x- and y-axis:

