

## **Distributed Generation – Example 2**

Written for PSCAD v4.5 and v4.6.

## Simulation Setup

Load the library (Battery\_Model\_v2.pslx) into PSCAD, then load the project DFIG\_PV\_Batt\_Diesel20kV.pscx) into PSCAD.

In the library Project Settings, link in the library file corresponding to your Fortran compiler.

For example:

• Display the library Project Settings (right-click on the library file, and select "Project Settings"):

Workspace		
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	Project Settings	
	Save	Ctrl+S

• When the Project Settings dialog displays, select the "Link" tab, and delete any text from the "Additional Static Library..." field:

Project Settings - Battery_Model_v2	X
General Fortran Link	
Additional Static Library (*.lib) and Object (*.obj/*.o) files	
	Browse

 Click on the "Browse" button, and browse to the .lib file corresponding to the Intel Fortran compiler that you will be compiling this project with.
For example,

> If you are using Intel Fortran Version 15, select the .lib file in " if15 " folder. Or

If you are using GFortran version 4.2, select the .lib file in " 🏓 gf42 " folder.

• Select "OK" to apply these changes and close Project Settings.

Project Settings - Battery_Model_v2	
General Fortran Link	
Additional Static Library (*.lib) and Object (*.obj/*.o) files	
\DistGenerationEx2\lib\if15\Battery_Model_v2.lib	Browse



## Select the compiler for PSCAD:

• Display the Application Options dialog (display the PSCAD Start menu, and select "Options").



• In the Application Options dialog, select the "Dependencies" tab from the drop-down menu, and select the compiler. Select "OK" to apply the changes and close the dialog.

🖳 Application Options	8		
Dependencies	•		
8‼ <b>2↓ 📑 🛷 </b> ₩			
▲ Fortran Compiler			
Version	Intel(R) Visual Fortran Compiler XE 15.0.1.148		
Number Format (Locale)	GFortran 4.2.1		
⊿ Matlab	GFortran 4.6.2		
Version	Intel(R) Visual Fortran Compiler XE 15.0.1.148		
Folder	Intel(R) Visual Fortran Compiler XE 15.0.1.148 (64-bit)		
ConfigurationFile	\$(HomeDir)\matlab_versions.xml		
▲ Models			
Master Library	\$(HomeDir)\master.pslx		
User Libraries Folder			
▲ Resources			
Online Help	\$(HomeURL)		
Local Help	\$(HomeDir)\help\ol-help.chm		
Examples Folder	\$(PublicDir)\Pscad\\$(Version)\Examples		
Help Browser	C:\Program Files (x86)\Internet Explorer\jexplore.exe		
Custom Help Folder			



The "project tree" shows the sub-modules in the simulation. Click on the modules to navigate between them. For example, to see the graphs and controls, click on the "DFIG\_Detailed\_Model\_1" module or double-click on the module shown as follows (it can be found in the main canvas).



The signals in the canvas can be traced using the "virtual wires" option as shown below. The simulation must be compiled to activate "virtual wires".

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