

April 2nd 2009

The NEPLAN TOOLBOX was presented at the PSCE 2009 Power Systems Conference & Exhibition in Seattle, Washington, USA



NEPLAN was one of the exhibitors at the PSCE
2009 Power Systems Conference & Exhibition
March 15 – 18, 2009.

Again, PSCE brought together an international group of practicing power systems engineers, operators, planners, policy makers, economists, academics and others.

NEPLAN presented its NEPLAN Power Systems TOOLBOX for researchers. TOOLBOX allows researchers and developers to define easily new power system models (e.g. control strategies) and new algorithms (e.g. SmartGrid integration, renewable energy models).

Detailed information on the following page.

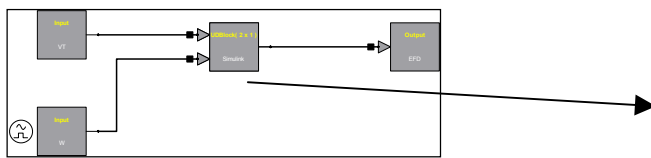
NEPLAN[®] Toolbox for Power Systems

The NEPLAN[®] Toolbox has been especially designed for **researchers and developers** which need to develop new power system models (e.g. control strategies) and new algorithm (e.g. SmartGrid applications). The Toolbox includes:

1. The **NPL NEPLAN Programming Library**, which is a C/C++ API that allows to access NEPLAN data and calculation algorithms through a C/C++ written program API functions included are amongst others:
 - execute any NEPLAN calculation engine
 - read/write access to all variables of all components
 - add / change /delete components and graphical data
 - retrieve the results from the NEPLAN analysis
2. An easy to use C/C++ API that allows developing user defined **models for load flow** calculations
3. A function block drawing editor, which allows to develop user defined models for controllers and primary components with function blocks
4. A **Matlab[®] interface**, which allows developing dynamic user defined models (controllers and primary components). The models may also be developed through the NEPLAN block diagram editor
5. A **Simulink[®] interface**, that allows to execute simultaneously the NEPLAN dynamic simulator and the Simulink[®] simulator. That means the controllers and/or primary components developed in Simulink[®] may be directly connected to a NEPLAN user defined model. When running the dynamic simulation in NEPLAN, then NEPLAN connects automatically to Matlab[®] and executes the Simulink[®] model in Matlab[®]. The rest of the network model will still be calculated in NEPLAN

NEPLAN[®] Toolbox for Researchers

- NPL - NEPLAN[®] Programming Library, a C/ C++ API to develop user defined algorithms
- C/ C++ API for user defined Loadflow models
- Function block diagram editor to defined dynamic models for controllers and primary components
- Matlab[®] interface for user defined dynamic modelling of components and controllers
- Simulink[®] interface for running dynamic models/controllers in Simulink[®] together with NEPLAN[®]



This NEPLAN function block uses the Simulink[®] controller.

