



European Network of  
Transmission System Operators  
for Electricity

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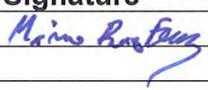
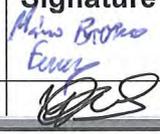
# INTEROPERABILITY TEST "CIM FOR SYSTEM DEVELOPMENT AND OPERATIONS" 2010

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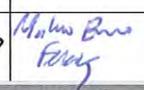
## **APPENDIX C: TEST RECORD FORMS**

### **PART 3**

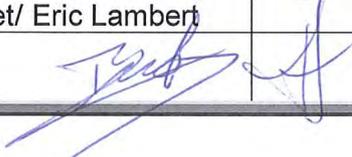
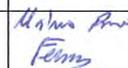
## TOOL SUMMARY FORM (PER TOOL)

<b>Vendor:</b> Supelec/EDF R&D		<b>Tool:</b> CIMclipse	
<b>Witnessed by</b>			
<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>
1. Mário Ferreira		9.	
2.		10.	
3.		11.	
4.		12.	
5.		13.	
6.		14.	
7.		15.	
8.		16.	
<b>Performed tests</b>			
<b>Test No</b>	<b>Score</b>	<b>Test No</b>	<b>Score</b>
1_1	PASS		
1_2	PASS		
<b>Comments:</b>			
<p>CIMclipse OCL Validator (<a href="http://wwwdi.supelec.fr/software/cimclipse">http://wwwdi.supelec.fr/software/cimclipse</a>) is a tool developed in the Computer Science Department of Supélec with funding from EDF R&amp;D that aims to provide usage within or based on Eclipse or its plugins, used for CIM related tasks and released as Open Source.</p> <p>Cimclipse can validate CimXml files against rules written in OCL (Object Constraint Language). These rules can correspond to a profile or can be defined by a company to enforce some business rules.</p> <p>Currently, Cimclipse does not process incremental files. It is expected to add this functionality.</p>			
<b>Date</b>	<b>Vendor</b> Supelec/EDF R&D	<b>ENTSO-E</b>	
13.07.2010	<b>Name</b> Dominique Marcadet/ Eric Lambert	<b>Name</b> Mário Ferreira	<b>Signature</b>
			
			

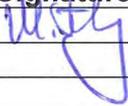
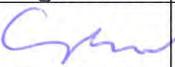
## SINGLE TEST RECORD FORM #1

<b>Test No:</b> 1_1		<b>Tool:</b> CIMclipse		<b>Score:</b> Pass	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_BE_EQ.xml			1. none		
2. ENTSOE_16_BE_TP.xml			2.		
3. ENTSOE_16_BE_DY.xml			3.		
4. ENTSOE_16_EU_EQ.xml					
5. ENTSOE_16_EU_TP.xml					
6. ENTSOE_16_NL_EQ.xml					
7. ENTSOE_16_NL_TP.xml					
8. ENTSOE_16_NL_DY.xml					
9. ENTSOE_16_SV.xml					
<b>Comments/Results/Issues:</b>					
<p>In this test, Cimclipse intended to import and interpret the contents of above mention files verifying it according to the standard ENTSO-E CIM profile. No load flow was performed because this capacity is outside the valences and objectives of the tested tool.</p> <p>Concerning CIMSpy 2.2 tool a verification task was triggered and a minor bug was fixed at "rbvalidator" Jscript file by Power Info LLC.</p> <p>The global main statistic figures were in accordance with CIMSpy tool results. Concerning importing and validation task, some issues were referred and subject to agreement during the IOP test (please consult ResultsOfImportByCimclipse.docx file):</p>					
<b>Supplementary files:</b>					
Please, refer to ResultsOfImportByCimclipse.docx file (results, issues and ENTSO-E IOP agreements) that has been provided to Chavdar Ivanov and commented Tuesday morning					
<b>Date</b>	<b>Vendor</b>		<b>Signature</b>	<b>Test witness</b>	
13.07.2010	Name Dominique Marcadet/ Eric Lambert			Name Mário Ferreira	
				Chavdar Ivanov	

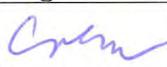
## SINGLE TEST RECORD FORM #2

<b>Test No: 1_2</b>		<b>Tool: CIMClipse</b>		<b>Score: Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. DlgSILENT files			1. none		
2.			2.		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
<p>Basically repeating the previous procedure, with networks exported by DlgSILENT (Power Factory 14.1).</p> <p>A file with rdf resource were found ("") : Test.1.2.2 ENTSOE_16_Pf_13j08h ENTSOE_16_NL_EQ.xml</p> <p>The file exported at 13j15 corrects the problem.</p>					
<b>Supplementary files:</b>					
<b>Date</b>	<b>Vendor</b>		<b>Signature</b>	<b>Test witness</b>	
13.07.2010	<b>Name</b>	Dominique Marcadet/ Eric Lambert	<b>Signature</b>	<b>Name</b> Mário Ferreira	<b>Signature</b>
					

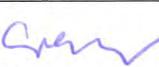
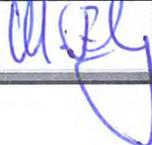
## TOOL SUMMARY FORM (PER TOOL)

<b>Vendor: FGH e. V.</b>		<b>Tool: INTEGRAL 7</b>			
<b>Witnessed by</b>					
<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>		
1. Marcel Forlong		9.			
2.		10.			
3.		11.			
4.		12.			
5.		13.			
6.		14.			
7.		15.			
8.		16.			
<b>Performed tests</b>					
<b>Test No</b>	<b>Score</b>	<b>Test No</b>	<b>Score</b>	<b>Test No</b>	<b>Score</b>
1_1	Pass	10_2	Pass		
1_2	Pass	10_3	Pass		
2_1	Pass with Error	10_4	Pass		
1_3	Pass	1_7	Pass		
2_2	Pass				
1_4	Pass				
1_5	Pass				
1_6	Pass				
9_1	Pass				
10_1	Pass				
<b>Comments:</b>					
Development version Integral 07.03.081 used for testing					
<p>Test 1.2.4 – 1.2.7 were not performed since the tool cannot export and import only TP/SV files alone in the moment. Additional development is needed. Test 1.2.8 was not performed since the short circuit data in the Test model are not plausible. Test 1.2.11 – 1.2.14 were not performed since the tool cannot export and import difference files. Test 1.2.15 – 1.2.26 are not performed, since the tool does no dynamic calculations.</p> <p>It would be very useful if the profiles would be fixed several weeks before the IOP test to give the vendors enough time to securely implement all modifications. Some changes to the profile were made only a few days before the IOP test or even during the IOP test.</p>					
<b>Date</b>	<b>Vendor</b>		<b>ENTSO-E</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremer, Dirk		Charidar Ivanov		

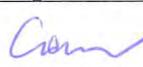
### SINGLE TEST RECORD FORM

<b>Test No: 1_1</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_[EQ,TP,SV].xml			1.		
2. ENTSOE_16_EU_[EQ,TP].xml			2.		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
Version_1_12July_SVInjection_signs, per_MAS used for Test					
<b>Supplementary files:</b>					
1_1_ENTSOE_16_NL.pdf: Network graphic with power flow results					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremer, Dirk		Falanga, Marcel		

### SINGLE TEST RECORD FORM

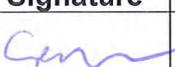
<b>Test No: 1_2</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_BE_[EQ,TP,SV].xml			1.		
2. ENTSOE_16_EU_[EQ,TP].xml			2.		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
Version_1_12July_SVInjection_signs, per_MAS used for Test					
<b>Supplementary files:</b>					
1_2_ENTSOE_16_BE.pdf: Network graphic with power flow results					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremus, Dirk		Farlong, Marcel		

## SINGLE TEST RECORD FORM

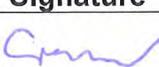
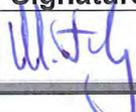
<b>Test No: 2_1</b>		<b>Tool: Integral7</b>		<b>Score: Passed with errors</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. Network from Test 1_1			1. ENTSOE_16_NL_IN_13J16_[EQ,TP,SV].xml		
2.			2. ENTSOE_16_EU_IN_13J16_[EQ,TP].xml		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
Version_1_12July_SVInjection_signs, per_MAS used for Test					
<b>Supplementary files:</b>					
Validation summaries:					
2_1_EU_EQ_summary_CIMspy.pdf, 2_1_EU_EQ_validate_CIMspy.pdf,					
2_1_EU_TP_summary_CIMspy.pdf, 2_1_EU_TP_validate_CIMspy.pdf,					
2_1_NL_EQ_summary_CIMspy.pdf, 2_1_NL_EQ_validate_CIMspy.pdf,					
2_1_NL_TP_summary_CIMspy.pdf, 2_1_NL_TP_validate_CIMspy.pdf,					
2_1_NL_SV_summary_CIMspy.pdf, 2_1_NL_SV_validate_CIMspy.pdf,					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremers, Dirk		Ferlong, Marcel		



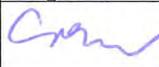
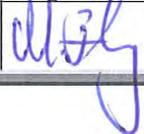
## SINGLE TEST RECORD FORM

<b>Test No: 2_2</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. Network from Test 1_3			1. ENTSOE_16_IN_14J09_NL_[EQ,TP,SV].xml		
2.			2. ENTSOE_16_IN_14J09_EU_[EQ,TP].xml		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
Version_2_13_July_PST corrected, per_MAS used for Test					
<b>Supplementary files:</b>					
Validation summaries:					
2_2_EU_EQ_summary_CIMspy.pdf, 2_2_EU_EQ_validate_CIMspy.pdf,					
2_2_EU_TP_summary_CIMspy.pdf, 2_2_EU_TP_validate_CIMspy.pdf,					
2_2_NL_EQ_summary_CIMspy.pdf, 2_2_NL_EQ_validate_CIMspy.pdf,					
2_2_NL_TP_summary_CIMspy.pdf, 2_2_NL_TP_validate_CIMspy.pdf,					
2_2_NL_SV_summary_CIMspy.pdf, 2_2_NL_SV_validate_CIMspy.pdf,					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremers, Dirk		Fordang, Marcel		

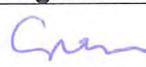
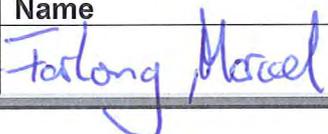
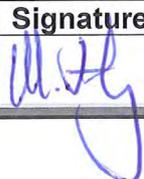
## SINGLE TEST RECORD FORM

<b>Test No: 1_4</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. 1.2.2 ENTSOE_16_PF_13J16h (DIgSILENT)			1.		
2.			2.		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
PhaseShiftingTransformer T3 in Substation PP_Amsterdam: RegulatingControlModeKind is set to voltage in the imported model instead of activePower					
After manually correction: Power Flow calculation brings the same results.					
<b>Supplementary files:</b>					
1_4_ENTSOE_16_BE_(imported_from_DIgSILENT).pdf: Network graphic with power flow results					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremers, Dirk		Farborg, Marcel		

### SINGLE TEST RECORD FORM

<b>Test No: 1_5</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. TEST 1.2.2\Per_MAS\BE (BCP)			1.		
2.			2.		
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
<p>SvShuntCompensatorSection.continuousPosition manually converted to SvShuntCompensatorSection.continuousSections in the imported files.</p> <p>Power flow calculation shows difference of X-node voltages of up to 4 kV. Reason: Integral uses SvVoltage of X-nodes for parametering target voltage of extendedWard injections. Imported files do not contain SvVoltage for X-nodes.</p> <p>After removing the target voltages of extendedWard injections from the imported original data, the results between original data and import of the PCB files meet very well.</p>					
<b>Supplementary files:</b>					
Result tables of Power Flow calculation: 1_5_ENTSOE_16_BE_(imported_from_BCE)_Flows.pdf 1_5_ENTSOE_16_BE_(imported_from_BCE)_NodeVoltages.pdf					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/10/10	Cremers Dijk		Falloy, Marcel		

### SINGLE TEST RECORD FORM

<b>Test No: 1_6</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_BE_OD_12J14h_EQ.xml			1.		
2. ENTSOE_16_BE_OD_12J14h_TP.xml			2.		
3. ENTSOE_16_OD_12J15h_SV.xml			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
<b>Supplementary files:</b>					
1_6_ENTSOE_16_BE_(imported_from_Siemens).pdf: Network graphic with Power flow results					
<b>Date</b>					
<b>Vendor</b>		<b>Signature</b>		<b>Test witness</b>	
<b>Name</b>		<b>Name</b>		<b>Signature</b>	
16/07/10		Cramer, Dirk		Fotlong, Marcel	
					
					

## SINGLE TEST RECORD FORM

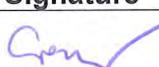
<b>Test No:</b> 9_1	<b>Tool:</b> Integral7	<b>Score:</b> Passed		
<b>Test files</b>				
<b>Import</b>	<b>Export</b>			
1. ENTSOE_16_NL_[EQ,TP,SV].xml	1.			
2. ENTSOE_16_BE_[EQ,TP,SV].xml	2.			
3. ENTSOE_16_EU_[EQ,TP].xml	3.			
4. Siemens export from test 1.2.4	4.			
5.	5.			
<b>Comments/Results/Issues:</b>				
Version_2_13_July_PST corrected, per_MAS used for Test				
<p>The two MAS were merged and after that a power flow calculation was performed. The active reactive power flow differs significantly from the target values in the ENTSO-E 16 node model description. This difference can be explained by the new model of the phase shifting transformer T3 (changes made on July 13<sup>th</sup>).</p> <p>Power flow results with the old phase shifting transformer T3 are presented in 9_1_comparison_with_old_transformer_T3.pdf</p> <p>For import of files resulting from test 1.2.4 the files exported by Siemens PTI were used:                  ENTSOE_16_NL_OD_13J12h_TP.xml                  ENTSOE_16_NL_OD_13J12h_SV.xml</p>				
<b>Supplementary files:</b>				
9_1_ENTSOE_16_PF.pdf: Network graphic with power flow results				
Validation summaries: 9_1_BE_EQ_summary_CIMspy.pdf, 9_1_BE_EQ_validate_CIMspy.pdf, 9_1_BE_TP_summary_CIMspy.pdf, 9_1_BE_TP_validate_CIMspy.pdf, 9_1_NL_EQ_summary_CIMspy.pdf, 9_1_NL_EQ_validate_CIMspy.pdf, 9_1_NL_TP_summary_CIMspy.pdf, 9_1_NL_TP_validate_CIMspy.pdf, 9_1_EU_EQ_summary_CIMspy.pdf, 9_1_EU_EQ_validate_CIMspy.pdf, 9_1_EU_TP_summary_CIMspy.pdf, 9_1_EU_TP_validate_CIMspy.pdf, 9_1_NL_EU_summary_CIMspy.pdf, 9_1_EU_SV_validate_CIMspy.pdf,				
9_1_ENTSOE_16_PF_with_Siemens_1.2.4.pdf: Network graphic with power flow results				
<b>Date</b>	<b>Vendor</b>	<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>
16/10/10	Cremers, Dirk		Talbot, Marcel	



## SINGLE TEST RECORD FORM

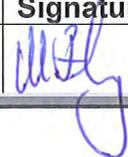
<b>Test No: 10_2</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_BE_[EQ,TP,SV].xml			1.		
2. ENTSOE_16_NL_[EQ,TP,SV].xml			2.		
3. ENTSOE_16_EU_[EQ,TP].xml			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
Version_2_13_July_PST corrected, own export from Test 1.2.9 used as Import					
<b>Supplementary files:</b>					
Tables with resulting node values and branch values:					
10_2_ENTSOE_16_from_1.2.9_Flows.pdf					
10_2_ENTSOE_16_from_1.2.9_Nodes.pdf					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremers, Dirk		Ferlang, Marcel		

## SINGLE TEST RECORD FORM

<b>Test No: 10_3</b>		<b>Tool: Integral7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_BE_OD_14J10h_[EQ,TP,SV].xml			1.		
2. ENTSOE_16_NL_OD_14J10h_[EQ,TP,SV].xml			2.		
3. ENTSOE_16_EU_[EQ,TP].xml			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
The files, Siemens exported in their Test 1.2.9, were used for the import. Since their export did not include the boundary MAS, the original boundary MAS was used.					
Compared with 1.2.9 ENTSOE_16_NL_BE_LDF_Results.wmf, generated from Siemens.					
<b>Supplementary files:</b>					
Tables with resulting node values and branch values:					
10_3_ENTSOE_16_from_Siemens_Flows.pdf					
10_3_ENTSOE_16_from_Siemens_Nodes.pdf					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremu, Dirk		Farlay, Marcel		



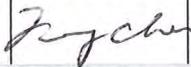
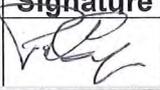
## SINGLE TEST RECORD FORM

<b>Test No: 1_7</b>		<b>Tool: INTEGRAL 7</b>		<b>Score: Passed</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. FGH_DE_EQ.xml			1.		
2. FGH_DE_TP.xml			2.		
3. FGH_DE_PF_Export_SV.xml			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
<p>The files imported in this test were exported by DlgSILENT</p> <p>After the import, the power flow calculation shows exactly the same active power flow as our original model. The difference in reactive power flow is less than 1% under the restriction that the asymmetrical equivalent branch from the original model cannot be modelled in ENTSO-E CIMXML profile.</p>					
<b>Supplementary files:</b>					
1_7_Reimport_FGH_Testmodel_exported_by_DlgSILENT.pdf: network graphic with power flow results					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16/07/10	Cremer, Dirk		Falorg, Marcel		

### TOOL SUMMARY FORM (PER TOOL)

<b>Vendor: GE Energy</b>			<b>Tool: Enterprise Gateway</b>		
<b>Witnessed by</b>					
<b>Name</b>		<b>Signature</b>		<b>Name</b>	
1. Pietro Capurso					
2. Adriano Gubernali					
3. Rimantas Rutkauskas		see test Record form			
<b>Performed tests</b>					
<b>Test No</b>	<b>Score</b>	<b>Test No</b>	<b>Score</b>	<b>Test No</b>	<b>Score</b>
1	Pass	13	Pass	6	Detect input Model error
2	Pass				
3	Pass	15	Pass	6_2	Detect input Model error
4	Pass	16	Pass		
5	Pass	15_2	Pass		
6_3	Pass	16_2	Pass		
7	Pass				
		27	Pass		
9	Pass				
10	Pass	30	Pass		
11	Pass	31	Pass		
<b>Comments:</b>					
<ul style="list-style-type: none"> <li>• Didn't do the following because no model available: 12, 14, 18, 19, 21, 22, 24, 25</li> <li>• Didn't do the following because no one else did either (no comparison possible): 17, 20, 23, 1.26</li> <li>• Didn't do the following because no applicable (we are SCADA/EMS vendor): 28, 29</li> <li>• Didn't do the following because no clear information/data for test case (we do have tool to perform this test): 8, (the short circuit location is not specified in the model, also, data such as load sequence component is missing in profile)</li> </ul> <p>Test 30 procedure is not so clear to user, may need clearly mentioned a MAS is updated and use as import</p>					
<b>Date</b>	<b>Vendor</b>		<b>ENTSO-E</b>		
July 15, 2010	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	Feng CHEN		Chavdar Ivanov		

## SINGLE TEST RECORD FORM

<b>Test No:</b> 1_1		<b>Tool:</b> Enterprise Gateway		<b>Score:</b> Pass	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1.N/A		
2. ENTSOE_16_NL_TP.xml			2.		
3. ENTSOE_16_NL_SV.xml			3.		
4. ENTSOE_16_EU_EQ.xml			4.		
5. ENTSOE_16_EU_TP.xml			5.		
<b>Comments/Results/Issues:</b>					
The following items were checked:					
Load data of area NL					
Generation data of area NL					
Tie flow data between area NL and EU					
Phase Shifter settings of the Transformer between NODE 4 and NODE 8					
The power flow gave the same results as from the original data of the model.					
During the course, the tool needs generated temporary files to merge the EQ and/or TP model of EU and NL. The supplement files are listed as below.					
<b>Supplementary files:</b>					
Merged EQ of EU and NL: eg_ENTSOE_16_EU_NL_test01_EQ.xml					
Merged TP of EU and NL: eg_ENTSOE_16_EU_NL_test01_TP.xml					
Screen shot: eg_test01_resolution_screen.doc					
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>	<b>Signature</b>	
July 12	<b>Name</b>	<b>Name</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Pietro Capurso		

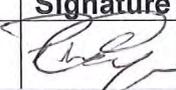
## SINGLE TEST RECORD FORM

<b>Test No:2_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_NL_test02_EQ.xml		
2. ENTSOE_16_NL_TP.xml			2. eg_ENTSOE_16_NL_test02_TP.xml		
3. ENTSOE_16_NL_SV.xml			3. eg_ENTSOE_16_NL_test02_SV.xml		
4. ENTSOE_16_EU_EQ.xml			4.		
5. ENTSOE_16_EU_TP.xml			5.		
<b>Comments/Results/Issues:</b>					
Cimspy was used to check all the instance counts and some instance details as below.					
Phase Shifter Tap position					
ControlArea					
GeographicRegion					
BaseVoltage					
VoltageLevel					
<p>It is noted that the original model contains class of <i>OperatingParticipant</i> and <i>Zone</i>. These two classes are not in the July 12 2010 version of Entso-E profile. The exported files do not contain these two classes.</p>					
<p>rdf:ID are also checked between original models and exported models for most of the elements.</p>					
<b>Supplementary files:</b>					
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>	<b>Signature</b>	
July 12	<b>Name</b>	<b>Name</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy	Pietro Capurso	Pietro Capurso		

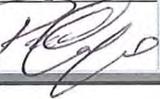
### SINGLE TEST RECORD FORM

<b>Test No: 3_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml (ver 12July)			1.		
2. ENTSOE_16_NL_TP.xml (ver 12July)			2.		
3. ENTSOE_16_EU_EQ.xml (ver 12July)			3.		
4. ENTSOE_16_EU_TP.xml (ver 12July)			4.		
5. ENTSOE_16_NL_SV.xml (ver 12July)			5.		
6.			6.		
7.			7.		
<b>Comments/Results/Issues:</b>					
<p>The comparison was made between the following tool in relation to the Test 01: SPIRA and Enterprise Gateway.</p> <p>All the results (Power Flow and Voltage) are comparable and mach in the engineering tolerance.</p>					
<b>Supplementary files:</b>					
Screen shot: EG_TEST03_1_SCREENSHOTH.doc					
<b>Date</b>		<b>Vendor</b>		<b>Test witness</b>	
13 July		<b>Name</b>		<b>Name</b>	
		GE Energy		Pietro Capurso	
		<b>Signature</b>		<b>Signature</b>	

## SINGLE TEST RECORD FORM

<b>Test No:4_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_NL_test04_TP.xml		
2. ENTSOE_16_NL_TP.xml			2. eg_ENTSOE_16_NL_test04_SV.xml		
3. ENTSOE_16_NL_SV.xml			3.		
4. ENTSOE_16_EU_EQ.xml			4.		
5. ENTSOE_16_EU_TP.xml			5.		
<b>Comments/Results/Issues:</b>					
The following Topology change is made: Change status of Breaker between NODE 8 and NODE 5 from Closed to Open Change status of Breaker between NODE 6 and NODE 9 from Open to Closed					
Voltage      KV					
Node 4      410.04					
Node 5      228.19					
Node 6      16.49					
Node 8      224.61					
Node 9      16.49					
MW Flow      MW      MVAr					
Node 8 -> Node 4      74.7      -28.3					
Node 6 -> Node 8      561.3      203.7					
Node 9-> Node 5      323.6      72.5					
The exported TP and SV file s include the boundary EU parts as well.					
When topology change applied, the tool merged the Node 6 and 9 together as one TopologicalNode (_1b8e9d416a5711dfa90800059a3c7800 is not exported)					
For the State Variable file, All the original information (rdf:ID) are updated, also, some other information such as SvPowerFlow, SvTapStep are added.					
<b>Supplementary files:</b>					
Power flow result: eg_test04_resolution_screen.doc					
CimSpy data: eg_test04_validation_screen.doc					
Equipment file: eg_ENTSOE_16_NL_test04_EQ.xml					
<b>Date</b>	<b>Vendor</b>	<b>Signature</b>	<b>Test witness</b>	<b>Signature</b>	
July 12	<b>Name</b>	<b>Name</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Pietro Capurso		

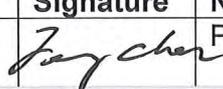
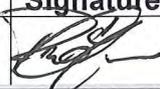
## SINGLE TEST RECORD FORM

<b>Test No:5_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_NL_test05_SV.xml		
2. ENTSOE_16_NL_TP.xml			2.		
3. ENTSOE_16_NL_SV.xml			3.		
4. ENTSOE_16_EU_EQ.xml			4.		
5. ENTSOE_16_EU_TP.xml			5.		
<b>Comments/Results/Issues:</b>					
The following StateVariable change is made: Change Load MW of "Load 2" at NODE 4 from 10MW to 50MW					
Voltage      KV					
Node 4      413.32					
Node 5      226.46					
Node 6      16.51					
Node 8      226.46					
Node 9      16.49					
MW Flow              MW              MVAr					
Node 8 -> Node 4      114.7              -29.9					
Node 6 -> Node 8      636.1              132.6					
Node 9-> Node 5      288.9              144.7					
For the State Variable file, All the original information (rdf:ID) are updated, also, some other information such as SvPowerFlow, SvTapStep are added.					
<b>Supplementary files:</b>					
Power flow result: eg_test05_resolution_screen.doc					
CimSpy data: eg_test05_validation_screen.doc					
Equipment file: eg_ENTSOE_16_NL_test05_EQ.xml					
Topology file: eg_ENTSOE_16_NL_test05_TP.xml					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 12	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Pietro Capurso		

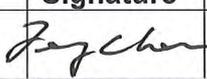
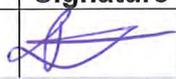
### SINGLE TEST RECORD FORM

<b>Test No:</b> 6_1		<b>Tool:</b> Enterprise Gateway		<b>Score:</b> <i>problem in input data</i>	
<b>Test files:</b>					
<b>Import:</b> BCP Busarello + Cott + Partner AG test 4			<b>Export</b>		
1. ENTSOE_16_BE_SV_NE_12J13h.xml			1. eg_ENTSOE_16_NL_test05_SV.xml		
2. ENTSOE_16_BE_TP_NE_12J13h.xml			2.		
3.			3.		
4. ENTSOE_16_EU_EQ.xml (official)			4.		
5. ENTSOE_16_BE_EQ.xml (official)			5.		
<b>Comments/Results/Issues:</b>					
Topo-Exported-1.2.4 has problem with the Topology file, it use a BaseVoltage as a TopologicalNode.ConnectivityNodeContainer, actually it is empty					
<u>Suggest to update the model to add actual rdf:resource</u>					
<b>Supplementary files:</b>					
Merge file: eg_ENTSOE_16_EU_BE_EQ.xml					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 13	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy	<i>Fug Chen</i>	Pietro Capurso	<i>Pietro Capurso</i>	

### SINGLE TEST RECORD FORM

<b>Test No:</b> 6_2	<b>Tool:</b> Enterprise Gateway	<b>Score:</b> <i>Problem in input data</i>
<b>Test files:</b>		
<b>Import: SP test 2</b>	<b>Export</b>	
1. eg_ENTSOE_16_NL_test04_TP.xml	1.	
2. eg_ENTSOE_16_NL_test04_SV.xml	2.	
3.	3.	
4. ENTSOE_16_EU_EQ.xml (official v1)	4.	
5. ENTSOE_16_NL_EQ.xml (official v1)	5.	
<b>Comments/Results/Issues:</b>		
<p>There is bad reference in EQ and TP file, which is not valid, the tool abort on that exception.</p> <p><u>Suggest to correct the model</u></p>		
<b>Supplementary files:</b>		
Merge file: eg_ENTSOE_16_EU_NL_SP_EQ.xml		
<b>Date</b>	<b>Vendor</b>	<b>Test witness</b>
July 13	<b>Name</b> GE Energy	<b>Name</b> Pietro Capurso
	<b>Signature</b> 	<b>Signature</b> 

## SINGLE TEST RECORD FORM

<b>Test No: 6_3</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import: DlgSILENT test 2 and 4</b>			<b>Export</b>		
1. ENTSOE_16_EU_EQ.xml			1.		
2. ENTSOE_16_EU_TP.xml			2.		
3. ENTSOE_16_NL_EQ.xml			3.		
4. ENTSOE_16_NL_TP.xml			4.		
5. 1.2.4 ENTSOE_16_PF_13J15h_SV.xml			5.		
<b>Comments/Results/Issues:</b>					
<p>The header information in the original files has issue, Have to remove the following item to continue process</p> <pre>&lt;md:Model.Version&gt;   &lt;md:Description&gt; &lt;/md:Description&gt; &lt;/md:Model.Version&gt;</pre>					
<b>Supplementary files:</b>					
Merged EQ file: eg_ENTSOE_16_EU_NL_dig_EQ.xml					
Merged TP file: eg_ENTSOE_16_EU_NL_dig_TP.xml					
Screen shot from EG and DigSilent: eg_test06_3_resolution_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 14	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

### SINGLE TEST RECORD FORM

<b>Test No:</b> 7_1		<b>Tool:</b> Enterprise Gateway		<b>Score:</b> <i>Pass</i>	
<b>Test files:</b>					
<b>Import: DlgSILENT test 2 and 5</b>			<b>Export</b>		
1. ENTSOE_16_EU_EQ.xml			1.		
2. ENTSOE_16_EU_TP.xml			2.		
3. ENTSOE_16_NL_EQ.xml			3.		
4. ENTSOE_16_NL_TP.xml			4.		
5. 1.2.5 ENTSOE_16_PF_13J16h_SV.xml (NL)			5.		
<b>Comments/Results/Issues:</b>					
Use the SV for NL (+EU) only from <b>DlgSILENT</b>					
Corrected header issue (null value)					
<pre>&lt;md:Model.Version&gt;   &lt;md:Description&gt; &lt;/md:Description&gt; &lt;/md:Model.Version&gt;</pre>					
Compared generation and transformer flow, the MW are the same, MVA <sub>r</sub> are within tolerance.					
<b>Supplementary files:</b>					
Merged TP file: eg_ENTSOE_16_EU_NL_test07_TP.xml					
Power flow result screen shot from EG and DigSilent: eg_test07_resolution_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 14	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

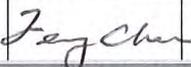
## SINGLE TEST RECORD FORM

<b>Test No:9_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files: Base plus test 4 files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_BE_test09_Exp_EQ.xml		
2. ENTSOE_16_NL_TP.xml			2. eg_ENTSOE_16_BE_test09_Exp_TP.xml		
3. ENTSOE_16_NL_SV.xml			3. eg_ENTSOE_16_EU_test09_Exp_EQ.xml		
4. ENTSOE_16_EU_EQ.xml			4. eg_ENTSOE_16_EU_test09_Exp_TP.xml		
5. ENTSOE_16_EU_TP.xml			5. eg_ENTSOE_16_NL_test09_Exp_EQ.xml		
6. ENTSOE_16_BE_EQ.xml			6. eg_ENTSOE_16_NL_test09_Exp_TP.xml		
7. ENTSOE_16_BE_TP.xml			7. eg_ENTSOE_16_Merged_test09_Exp_SV.xml		
8. ENTSOE_16_BE_SV.xml					
9. eg_ENTSOE_16_NL_test04_TP.xml					
10. eg_ENTSOE_16_NL_test04_SV.xml.					
<b>Comments/Results/Issues:</b>					
Use the files from Test 4, The following Topology change was made: Change status of Breaker between NODE 8 and NODE 5 from Closed to Open Change status of Breaker between NODE 6 and NODE 9 from Open to Closed					
During solution 2, it is found the update from test 4 is processed. The solution is converged and power flow changed from the base original model status, as expected.					
<b>Supplementary files:</b>					
Files during merging					
eg_ENTSOE_16_EU_NL_BE_test09_EQ.xml					
eg_ENTSOE_16_EU_NL_BE_test09_TP.xml					
eg_ENTSOE_16_EU_NL_test09_EQ.xml					
eg_ENTSOE_16_EU_NL_test09_TP.xml					
eg_ENTSOE_16_NL_BE_test09_SV.xml					
Solution snapshot file after merging and updating					
eg_test09_resolution1_screen.doc					
eg_test09_resolution2_screen.doc					
Files during updating					
eg_ENTSOE_16_EU_NL+_BE_test09_TP.xml					
eg_ENTSOE_16_NL+_BE_test09_SV.xml					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 15	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Pietro Capurso		

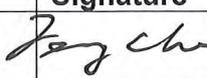
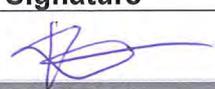
## SINGLE TEST RECORD FORM

<b>Test No:10_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import: DigSILENT test 9 V2 file</b>			<b>Export</b>		
1. ENTSOE_16_EU_EQ.xml			1.		
2. ENTSOE_16_EU_TP.xml			2.		
3. ENTSOE_16_NL_EQ.xml			3.		
4. ENTSOE_16_NL_TP.xml			4.		
5.					
6.					
7. 1.2.9 ENTSOE_16_PF_13J16h_SV.xml			5.		
<b>Comments/Results/Issues:</b>					
Corrected header issue (null value) <code>&lt;md:Model.Version&gt;</code> <code>&lt;md:Description&gt;</code> <code>&lt;/md:Description&gt;</code> <code>&lt;/md:Model.Version&gt;</code>					
Corrected the null reference issue such as below (for BE EQ): <code>&lt;cim:RegulatingCondEq.RegulatingControl rdf:resource="" /&gt;</code>					
<b>Supplementary files:</b>					
Merging temp file eg_ENTSOE_16_EU_NL_BE_test10_EQ.xml eg_ENTSOE_16_EU_NL_BE_test10_TP.xml eg_ENTSOE_16_EU_NL_test10_EQ.xml eg_ENTSOE_16_EU_NL_test10_TP.xml					
results snapshot from EG and tool B: DigSilent eg_test10_resolution_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 14	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

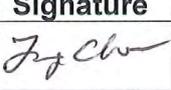
### SINGLE TEST RECORD FORM

<b>Test No:</b> 11_1		<b>Tool:</b> Enterprise Gateway		<b>Score:</b> Pass	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. eg_ENTSOE_16_NL_test02_EQ.xml			1. eg_ENTSOE_16_EU_NL_test11_Exp_diff.xml		
2. eg_ENTSOE_16_NL_test02_TP.xml			2. eg_ENTSOE_16_EU_NL_test11_Exp_TP.xml		
3. eg_ENTSOE_16_NL_test02_SV.xml			3. eg_ENTSOE_16_EU_NL_test11_Exp_SV.xml		
4. ENTSOE_16_EU_EQ.xml			4.		
5. ENTSOE_16_EU_TP.xml			5.		
6.					
7.					
8.					
<b>Comments/Results/Issues:</b>					
<p>The following changes are made:                  Add a station with name "EG test",                  Changed the Phase Shifter (Transformer T3) Stepsize and Reactance</p>					
<b>Supplementary files:</b>					
Merged EQ file: ENTSOE_16_EU_NL_test11_EQ.xml					
Merged TP file: ENTSOE_16_EU_NL_test11_TP.xml					
Solution result screen shot: eg_test11_resolution_screen.doc					
Cimspy validation: eg_test11_validation_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 13	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Pietro Capurso		

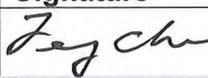
SINGLE TEST RECORD FORM

<b>Test No:13_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files: GE test 11 files + base EQ</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_Full_test13_Exp_diff.xml		
2. ENTSOE_16_NL_TP.xml			2. eg_ENTSOE_16_Full_test13_Exp_TP.xml		
3. ENTSOE_16_NL_SV.xml			3. eg_ENTSOE_16_Full_test13_Exp_SV.xml		
4. ENTSOE_16_EU_EQ.xml			4.		
5. ENTSOE_16_EU_TP.xml			5.		
6. ENTSOE_16_BE_EQ.xml					
7. ENTSOE_16_BE_TP.xml					
8. ENTSOE_16_BE_SV.xml					
<b>Comments/Results/Issues:</b>					
<p>The following change is made                  Add new station "EG Test2"                  Changed Line Resistance and Reactance for Line "DFG-THY 2"                  Change Load Mw value from 100MW to 120MW for Load "D1"</p>					
<b>Supplementary files:</b>					
Merged base system file: eg_ENTSOE_16_All_test13_base_EQ.xml eg_ENTSOE_16_All_test13_base_TP.xml, eg_ENTSOE_16_All_test13_base_SV.xml					
Solution result screen shot: eg_test13_resolution_screen.doc					
Validation screen shot: eg_test13_validation_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 15	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

### SINGLE TEST RECORD FORM

<b>Test No:15_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. <del>eg_ENTSOE_16_NL_test15_DY.xml</del>		
4. ENTSOE_16_NL_TP.xml			2.		
5. ENTSOE_16_NL_SV.xml			3.		
4. ENTSOE_16_NL_DY.xml			4.		
5.			5.		
6.					
7.					
8.					
<b>Comments/Results/Issues:</b>					
We did test 15 and 16 together, the exported file is from test 16					
<b>Supplementary files:</b>					
eg_test15_16_validation_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 13	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Adriano Gubernali		

### SINGLE TEST RECORD FORM

<b>Test No:</b> 15_2		<b>Tool:</b> Enterprise Gateway		<b>Score:</b> Pass	
<b>Test files:</b> ABB <del>User-defined</del> model					
<b>Import</b>			<b>Export</b>		
1.Export_ENTSO- E_16_MergedMAS_EQ_BM_14JUL10h.xml			1. <del>eg_ENTSOE_16_ABB_NM_test15_DY.xml</del>		
2. Export_ENTSO- E_16_MergedMAS_TP_BM_14JUL10h.xml			2.		
3. Export_ENTSO- E_16_MergedMAS_SV_BM_14JUL10h.xml			3.		
4. rt_ENTSO- E_16_MergedMAS_DY_BM_14JUL10h.xml			4.		
5.			5.		
6.					
7.					
8.					
<b>Comments/Results/Issues:</b>					
We did test 15 and 16 together, the exported file is from test 15					
<b>Supplementary files:</b>					
eg_test15_16_validation_screen.doc					
<b>Date</b>		<b>Vendor</b>		<b>Test witness</b>	
July 15		<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>
		GE Energy		Rimantas Rutkauskas	

### SINGLE TEST RECORD FORM

<b>Test No: 16_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_NL_test15_DY.xml		
4. ENTSOE_16_NL_TP.xml			2. <i>-EQ.xml</i>		
5. ENTSOE_16_NL_SV.xml			3. <i>-TP.xml</i>		
4. ENTSOE_16_NL_DY.xml			4. <i>-SV.xml</i>		
5.			5.		
6.					
7.					
8.					
<b>Comments/Results/Issues:</b>					
We did test 15 and 16 together, the exported file is from test 16					
<b>Supplementary files:</b>					
eg_test15_16_validation_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 13	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy	<i>[Signature]</i>	Adriano Gubernali	<i>[Signature]</i>	

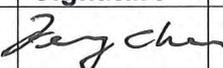
### SINGLE TEST RECORD FORM

<b>Test No:16_2</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files: ABB User-defined model</b>					
<b>Import</b>			<b>Export</b>		
1.Export_ENTSO-E_16_MergedMAS_EQ_BM_14JUL10h.xml			1. eg_ENTSOE_16_ABB_NM_test16_DY.xml		
2. Export_ENTSO-E_16_MergedMAS_TP_BM_14JUL10h.xml			2. <span style="float:right">-EQ.xml</span>		
3. Export_ENTSO-E_16_MergedMAS_SV_BM_14JUL10h.xml			3. <span style="float:right">-TP.xml</span>		
4. rt_ENTSO-E_16_MergedMAS_DY_BM_14JUL10h.xml			4. <span style="float:right">-SV.xml</span>		
5.			5.		
6.					
7.					
8.					
<b>Comments/Results/Issues:</b>					
We did test 15 and 16 together, the exported file is from test 16					
The snapshot file include instance data from import, export and validation with Cimsy					
<b>Supplementary files:</b>					
eg_test15_16_validation_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 15	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

### SINGLE TEST RECORD FORM

<b>Test No:</b> 27_1	<b>Tool:</b> Enterprise Gateway	<b>Score:</b> Pass
<b>Test files: GE operational model</b>		
<b>Import</b>	<b>Export</b>	
1. ge1_EQ.xml	1. eg_EntsoE_ge1_EQ.xml	
2. ge1_TP_v2.xml	2. eg_EntsoE_ge1_TP.xml	
3. ge1_SV.xml	3. eg_EntsoE_ge1_SV.xml	
4.	4.	
5.	5.	
6.		
7.		
8.		
<b>Comments/Results/Issues:</b>		
<p>This test import GE SCADA/EMS model in the CPSM IOP12, run power flow, then export a Entso-E strictly compliant model.</p> <p>The snapshot file include instance data from import, export and validation with Cimspy for Equipment, Topology and State Variables profile</p>		
<b>Supplementary files:</b>		
eg_test27_validation_screen.doc		
<b>Date</b>	<b>Vendor</b>	<b>Test witness</b>
July 15	<b>Name</b>	<b>Name</b>
	GE Energy	Rimantas Rutkauskas
	<b>Signature</b>	<b>Signature</b>
		

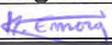
## SINGLE TEST RECORD FORM

<b>Test No:30_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files: Official plus change</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_NL_EQ.xml			1. eg_ENTSOE_16_EU_NL_BE+_test30_exp_EQ.xml		
2. ENTSOE_16_NL_TP.xml			2 eg_ENTSOE_16_EU_NL_BE_test30_exp_TP.xml		
3. ENTSOE_16_NL_SV.xml			3 eg_ENTSOE_16_NL_BE_test30_exp_SV.xml		
4. ENTSOE_16_EU_EQ.xml					
5. ENTSOE_16_EU_TP.xml					
6. ENTSOE_16_BE_EQ.xml					
7. ENTSOE_16_BE_TP.xml					
8. ENTSOE_16_BE_SV.xml					
9.					
10. eg_ENTSOE_16_BE_test30_upd_EQ.xml (update)					
<b>Comments/Results/Issues:</b>					
<p>In Equipment model:  Add a Station called "EG Station"  Change ThermalGeneratingUnit "Unit G1" _1b8e9dcb6a5711dfa90800059a3c7800 High limit  and rate from 200 to 250</p> <p>Verified the change are in the merged model through Cimsy</p> <p>Another vendor B may import the change ENTSOE_16_BE_test30_upd_EQ.xml to their base  model and verify the update is there</p>					
<b>Supplementary files:</b>					
eg_test30_validation_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 15	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

### SINGLE TEST RECORD FORM

<b>Test No:31_1</b>		<b>Tool: Enterprise Gateway</b>		<b>Score: Pass</b>	
<b>Test files:</b>					
<b>Import: DlgSILENT test 2 export files</b>			<b>Export</b>		
<b>1.2.2 ENTSOE_16_PF_13J16h.zip</b>					
1. ENTSOE_16_EU_EQ.xml		1.			
2. ENTSOE_16_NL_EQ.xml		2.			
3.		3.			
4.		4.			
5.		5.			
<b>Comments/Results/Issues:</b>					
<p>In the header the Model.Version is like below which contains no actual (null) data.</p> <pre>&lt;md:Model.Version&gt;   &lt;md:Description&gt;   &lt;/md:Description&gt; &lt;/md:Model.Version&gt;</pre> <p>Tool reported "Error null" message.</p> <p>Suggest to either put actual data in or remove the class item Model.Version</p> <p>For the tool, will add message information to tell the user more detail about the error exception such as which class.</p>					
<b>Supplementary files:</b>					
eg_test31_error_screen.doc					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
July 14	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
	GE Energy		Rimantas Rutkauskas		

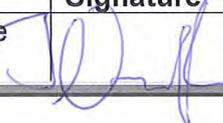
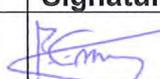
## TOOL SUMMARY FORM (PER TOOL)

<b>Vendor: Intercompro AG</b>		<b>Tool: ISPEN</b>	
<b>Witnessed by</b>			
<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>
1. Marc Emery		9.	
<b>Performed tests</b>			
<b>Test No</b>	<b>Score</b>	<b>Test No</b>	<b>Score</b>
1_1	PASSED		
2_1	PASSED		
2_2	PASSED		
4_1	PASSED		
5_1	PASSED		
9_1	PASSED		
<b>Comments:</b>			
<ol style="list-style-type: none"> <li>The most meaningful comparison between the load flow calculation and the official results, page 11 of <i>ENTSO-E IOP "CIM for System Development and Operations" 2010 ENTSO-E 16 nodes model – description</i> showed that <b>ISPEN could perfectly reproduce the results of Belgium and Boundary (Test 2) and Belgium, Netherlands and Boundary (Test 10)</b>.</li> <li>Test 2 was performed twice: once using the Official Test Models (_1), once using the files exported by Busarello + Cott + Partner (_2).</li> <li>The following tests were not performed: <ul style="list-style-type: none"> <li>Tests 3, 6, 7 and 10 (comparison between tools) because of remaining differences in interpretation between tools.</li> <li>Test 8 because ISPEN does not perform short circuit calculations.</li> <li>Tests 11, 12 and 13 because, especially due to the continuous profile change, the time for producing such difference files is not ripe.</li> <li>Tests 15 thru 26, because ISPEN does not perform dynamic calculations.</li> <li>Tests 27 thru 31.</li> </ul> </li> </ol>			
<p><b>Recommendation: We strongly recommend to freeze the profile at least one week before the test starts, which would greatly improve the interoperability.</b></p>			
<b>Date</b>	<b>Vendor</b>	<b>ENTSO-E</b>	
16.7.2010	<b>Name</b>	<b>Name</b>	<b>Signature</b>
	Ingemund Nordanlycke	Charidar Ivanov	

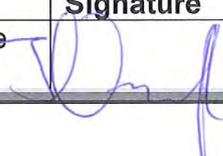
## SINGLE TEST RECORD FORM

<b>Test No:1_1</b>		<b>Tool:ISPEN</b>		<b>Score:Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1.ENTSOE_16_BE_EQ.xml			1.		
ENTSOE_16_BE_SV.xml					
ENTSOE_16_BE_TP.xml					
2. ENTSOE_16_EU_EQ.xml			2.		
ENTSOE_16_EU_TP.xml					
3.			3.		
4.			4.		
5.			5.		
<b>Comments/Results/Issues:</b>					
<p><b>Supplementary files:</b></p> <p>ENTSOE_16_instance_IS_14J13h.txt This file comprises the export of the file in the 'old' UCTE DEF format. With this file, the instances check was performed: we compared the parameters of a couple of lines and transformers.</p> <p>ENTSOE_16_load flow results_IS_14J13h.txt This file comprises the full load flow results obtained with ISPEN, which were checked.</p>					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16.7.2010	Ingemund Nordanlycke		Marc Emery		

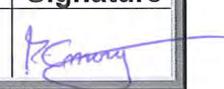
## SINGLE TEST RECORD FORM

<b>Test No:2_1</b>		<b>Tool:ISPEN</b>		<b>Score:Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1.ENTSOE_16_BE_EQ.xml ENTSOE_16_BE_SV.xml ENTSOE_16_BE_TP.xml			1.ENTSOE_16_SV_IS_14J14h.xml		
2. ENTSOE_16_EU_EQ.xml ENTSOE_16_EU_TP.xml			2. ENTSOE_16_TP_IS_14J14h.xml		
3.			3. (ENTSOE_16_BE_EQ.xml)		
4.			4. (ENTSOE_16_EU_EQ.xml)		
5.			5.		
<b>Comments/Results/Issues:</b>					
ISPEN can change the topology, the tap positions or the loads/injections, but not the equipment data. Therefore ISPEN only modifies the SV and TP files; the output 'EQ' file is the same as the input 'EQ' file. The exported files are for the whole grid (BE and Boundary) and not only for one MAS.					
<b>Supplementary files:</b>					
ENTSOE_16_instance_IS_14J17h.txt This file comprises the export of the file in the 'old' UCTE DEF format. With this file, the instances check was performed: we compared the parameters of a couple of lines and transformers.					
ENTSOE_16_SV_IS_14J16h.gif ENTSOE_16_TP_IS_14J16h.gif These files are printscreens from CIMSpy that prove that both exported files were validated.					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16-7-2010	Ingemund Nordanlycke		Marc Emery		

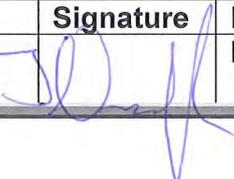
## SINGLE TEST RECORD FORM

<b>Test No:2_2</b>		<b>Tool:ISPEN</b>		<b>Score:Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1. ENTSOE_16_BE_EQ_NE_14J10h.xml ENTSOE_16_BE_SV_NE_14J10h.xml ENTSOE_16_BE_TP_NE_14J10h.xml			1. ENTSOE_16_SV_IS_16J10h.xml		
2. ENTSOE_16_EU_EQ_NE_14J10h.xml ENTSOE_16_EU_TP_NE_14J10h.xml			2. ENTSOE_16_TP_IS_16J10h.xml		
3.			3. (ENTSOE_16_BE_EQ_NE_14J10h.xml)		
4.			4. (ENTSOE_16_EU_EQ_NE_14J10h.xml)		
5.			5.		
<b>Comments/Results/Issues:</b>					
<p>ISPEN can change the topology, the tap positions or the loads/injections, but not the equipment data. Therefore ISPEN only modifies the SV and TP files; the output 'EQ' file is the same as the input 'EQ' file.</p> <p>The exported files are for the whole grid (BE and Boundary) and not only for one MAS. The files exported by NEPLAN were imported.</p>					
<b>Supplementary files:</b>					
<p>ENTSOE_16_instance_IS_16J10h.txt This file comprises the export of the file in the 'old' UCTE DEF format.</p> <p>ENTSOE_16_SV_IS_16J10h.gif ENTSOE_16_TP_IS_16J10h.gif These files are screenshots from CIMSpy that prove that both exported files were validated.</p>					
<b>Date</b>	<b>Vendor</b>		<b>Test witness</b>		
	<b>Name</b>	<b>Signature</b>	<b>Name</b>	<b>Signature</b>	
16.7.2010	Ingemund Nordanlycke		Marc Emery		

## SINGLE TEST RECORD FORM

<b>Test No:4_1</b>		<b>Tool:ISPEN</b>		<b>Score:Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1.ENTSOE_16_BE_EQ.xml ENTSOE_16_BE_SV.xml ENTSOE_16_BE_TP.xml			1.ENTSOE_16_SV_IS_14J17h.xml		
2. ENTSOE_16_EU_EQ.xml ENTSOE_16_EU_TP.xml			2. ENTSOE_16_TP_IS_14J17h.xml		
3.			3. (ENTSOE_16_BE_EQ.xml)		
4.			4. (ENTSOE_16_EU_EQ.xml)		
5.			5.		
<b>Comments/Results/Issues:</b>					
The files from 1.2.1. were used. The topology change required by the witness was to put out of operation the transformer BGENT_51 -00- BGENT_11.					
ISPEN can change the topology, the tap positions or the loads/injections, but not the equipment data. Therefore ISPEN only modifies the SV and TP files; the output 'EQ' file is the same as the input 'EQ' file.					
The exported files are for the whole grid (BE and Boundary) and not only for one MAS.					
<b>Supplementary files:</b>					
ENTSOE_16_SV_IS_14J17h.gif ENTSOE_16_TP_IS_14J17h.gif					
These files are printscreens from CIMSpy that prove that both exported files were validated.					
ENTSOE_16_load flow results_IS_14J17h.txt					
This file comprises the full load flow results obtained with ISPEN, where it was checked that transformer BGENT_51 -00- BGENT_11 was out of operation.					
<b>Vendor</b>		<b>Signature</b>		<b>Test witness</b>	
<b>Name</b>		<b>Signature</b>		<b>Name</b>	
16.7.2010 Ingemund Nordanlycke				Marc Emery	
					

## SINGLE TEST RECORD FORM

<b>Test No:5_1</b>		<b>Tool:ISPEN</b>		<b>Score:Pass</b>	
<b>Test files</b>					
<b>Import</b>			<b>Export</b>		
1.ENTSOE_16_BE_EQ.xml ENTSOE_16_BE_SV.xml ENTSOE_16_BE_TP.xml			1.ENTSOE_16_SV_IS_15J10h.xml		
2. ENTSOE_16_EU_EQ.xml ENTSOE_16_EU_TP.xml			2. (ENTSOE_16_TP_IS_15J10h.xml)		
3.			3. (ENTSOE_16_BE_EQ.xml)		
4.			4. (ENTSOE_16_EU_EQ.xml)		
5.			5.		
<b>Comments/Results/Issues:</b>					
The files from 1.2.1. were used. The change required by the witness was to modify the load in BGEN <sub>T</sub> _5 from 100 MW/90 MVA <sub>r</sub> to 150 MW/110 MVA <sub>r</sub> .					
ISPEN can change the topology, the tap positions or the loads/injections, but not the equipment data. Therefore ISPEN only modifies the SV and TP files; the output 'EQ' file is the same as the input 'EQ' file.					
The exported files are for the whole grid (BE and Boundary) and not only for one MAS.					
<b>Supplementary files:</b>					
ENTSOE_16_SV_IS_15J10h.gif ENTSOE_16_TP_IS_15J10h.gif					
These files are printscreens from CIMSpy that prove that both exported files were validated.					
ENTSOE_16_load flow results_IS_15J10h.txt					
This file comprises the full load flow results obtained with ISPEN, where it was checked that load in BGEN <sub>T</sub> _5 was changed from 100 MW/90 MVA <sub>r</sub> to 150 MW/110 MVA <sub>r</sub> .					
<b>Vendor</b>		<b>Test witness</b>			
<b>Name</b>		<b>Signature</b>		<b>Signature</b>	
Ingemund Nordanlycke				Marc Emery	
16.7.2010					

## SINGLE TEST RECORD FORM

<b>Test No:</b> 9_1	<b>Tool:</b> ISPEN	<b>Score:</b> Pass
<b>Test files</b>		
<b>Import</b>		<b>Export</b>
1.ENTSOE_16_BE_EQ.xml ENTSOE_16_BE_SV.xml ENTSOE_16_BE_TP.xml		1.ENTSOE_16_SV_IS_15J14h.xml
2. ENTSOE_16_NL_EQ.xml ENTSOE_16_NL_SV.xml ENTSOE_16_NL_TP.xml		2. ENTSOE_16_TP_IS_15J14h.xml
3. ENTSOE_16_EU_EQ.xml ENTSOE_16_EU_TP.xml		3. (ENTSOE_16_BE_EQ.xml)
4.		4. (ENTSOE_16_NL_EQ.xml)
5.		5. (ENTSOE_16_EU_EQ.xml)
<b>Comments/Results/Issues:</b>		
<ol style="list-style-type: none"> <li>1. Only Solution 1 was performed.</li> <li>2. ISPEN can change the topology, the tap positions or the loads/injections, but not the equipment data. Therefore ISPEN only modifies the SV and TP files; the output 'EQ' file is the same as the input 'EQ' file.</li> <li>3. The exported files are for the whole grid (BE, NL and Boundary) and not only for one MAS.</li> <li>4. In order to obtain load flow results very near to the chart of page 11 of <i>ENTSO-E IOP "CIM for System Development and Operations" 2010</i>, the tap position of the PST device had to be changed.</li> </ol>		
<b>Supplementary files:</b>		
ENTSOE_16_SV_IS_15J14h.gif ENTSOE_16_TP_IS_15J14h.gif These files are printscreens from CIMSpy that prove that both exported files were validated.		
ENTSOE_16_load flow results_IS_15J14h.txt This file comprises the full load flow results obtained with ISPEN where it can be seen that the results are almost perfectly in line with <i>ENTSO-E IOP "CIM for System Development and Operations" 2010</i> .		

Vendor		Test witness	
Name	Signature	Name	Signature
16-7-2010 Ingemund Nordanlycke		Marc Emery	