IEC 61850 Certificate Level A[1]

No. 30920547-Consulting 10-0464

Issued to:

Telvent Energía, S.A.
Valgrande, 6 Alcobendas
28108 – Madrid
Spain

For the client system:

Telvent subCAT
firmware version 1.409

Issued by: **KEMA**

The product has not shown to be non-conforming to:

IEC 61850-6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems in substations

The conformance test has been performed according to IEC 61850-10 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the Telvent subCAT IEC 61850 interface, version 0.3", "Model Implementation Conformance Statement for the Telvent subCAT IEC 61850 interface, version 0.2", "TISSUES Implementation Conformance Statement for the Telvent subCAT IEC 61850 interface, version 0.2" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing for the Telvent subCAT IEC 61850 interface, version 0.5".

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases as defined in the UCAIUG Client Test procedures version 1.1):

1	Basic Exchange (12/22)		12c	Enhanced Direct Control (4/7)	
5	Unbuffered Reporting (13/18)		12d	Enhanced SBO Control (5/9)	
6	Buffered Reporting (17/22)		13	Time Synchronization (3/4)	
12a	Direct Control (4/7)		14	File Transfer (5/8)	
12b	SBO Control (5/9)				

This Certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCA Multi IED simulator version 1.21.01 and UniCA 61850 Analyzer 61850 version 4.18.01. The test is based on the UCAIUG "Conformance Test Procedures for Client System with IEC 61850-8-1 interface, version 1.1". This document has been issued for information purposes only, and the original paper copy of the test report: No. 30920547-Consulting 10-0463 will prevail.

The test has been carried out on one single specimen of the client system as referred above and submitted to KEMA by Telvent Energia. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, February 26, 2010

W. Strabbing
Manager Intelligent Network and Communications

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1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System

Applicable Test Procedures from the UCAIUG "Conformance Test Procedures for Client System with IEC 61850-8-1 interface, version 1.1"

	Conformance Block	Mandatory	Conditional
1:	Basic Exchange	cAss1, cAss2, cAss3, cAss4, cAssN1, cAssN6, cSrv5, cSrvN3	cAssN4, cAssN5, cAssN7 cSrvN5
5:	Unbuffered Reporting	cRp2, cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRpN2, cRpN3, cRpN7, cRpN8	cRp7, cRpN4
6:	Buffered Reporting	cBr2, cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr12, cBrN2, cBrN3, cBrN7, cBrN8, cBrN9	cBr7, cBr13, cBrN4
12a:	Direct control	cCtl4, cCtlN1 cDOns1, cDOns2	
12b:	SBO control	cCtl4, cCtlN1 cSBOns1, cSBOns2, cSBOns3	
12c:	Enhanced Direct Control	cCtl4, cCtlN1 cDOes1, cDOes2	
12d:	Enhanced SBO control	cCtl4, cCtlN1, cSBOes1, cSBOes2, cSBOes3	
13:	Time sync	cTm1, cTm2, cTmN1	
14:	Get File transfer	cFt1, cFt2, cFt3, cFtN1, cFtN2	