



TECHNICAL SPECIFICATION



**Energy management system application program interface (EMS-API) –
Part 600-2: Common Grid Model Exchange Specification (CGMES) – Exchange
profiles specification**

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CONTENTS

FOREWORD.....	24
1 Scope.....	26
2 Normative references	26
3 Terms, definitions and abbreviated terms	27
3.1 Terms and definitions.....	27
3.2 Abbreviated terms.....	28
4 EquipmentBoundaryProfile	28
4.1 General.....	28
4.2 (Entsoe) EquipmentBoundaryVersion(Abstract).....	29
4.3 Core	30
4.3.1 ConductingEquipment(Abstract)	30
4.3.2 (Operation) ConnectivityNode.....	31
4.3.3 ConnectivityNodeContainer(Abstract)	33
4.3.4 Equipment(Abstract)	33
4.3.5 EquipmentContainer(Abstract)	34
4.3.6 PowerSystemResource(Abstract).....	34
4.3.7 Terminal	35
4.3.8 BaseVoltage	35
4.3.9 GeographicalRegion	35
4.3.10 IdentifiedObject(Abstract).....	36
4.3.11 SubGeographicalRegion.....	36
4.4 Wires.....	37
4.4.1 Connector(Abstract).....	37
4.4.2 (Entsoe) EnergySchedulingType.....	38
4.4.3 EnergySource(Abstract).....	38
4.4.4 Junction.....	39
4.4.5 Line.....	40
4.5 Global Used Datatypes	40
4.5.1 Datatypes – Voltage	40
4.5.2 Enumerations	41
4.5.3 Primitives	42
5 TopologyBoundaryProfile.....	42
5.1 General.....	42
5.2 (Entsoe) TopologyBoundaryVersion(Abstract).....	43
5.3 Core	44
5.3.1 BaseVoltage(Abstract).....	44
5.3.2 (Operation,Description) ConnectivityNode	45
5.3.3 ConnectivityNodeContainer(Abstract)	45
5.3.4 IdentifiedObject(Abstract).....	45
5.4 Topology – TopologicalNode.....	46
5.5 Global Used Datatypes – Primitives	48
5.5.1 String	48
5.5.2 Date	48
5.5.3 Boolean	48
6 EquipmentProfile	48
6.1 General.....	48

6.2	(Entsoe) EquipmentVersion(Abstract)	49
6.3	DC	51
6.3.1	General	51
6.3.2	ACDCConverter(Abstract).....	54
6.3.3	ACDCConverterDCTerminal	56
6.3.4	CsConverter	57
6.3.5	DCBaseTerminal(Abstract)	59
6.3.6	DCBreaker.....	60
6.3.7	DCBusbar	60
6.3.8	DCChopper.....	61
6.3.9	DCConductingEquipment(Abstract).....	62
6.3.10	DCConverterUnit	63
6.3.11	DCDisconnecter.....	63
6.3.12	DCEquipmentContainer	64
6.3.13	DCGround	64
6.3.14	DCLine	65
6.3.15	DCLineSegment	66
6.3.16	DCNode.....	67
6.3.17	DCSeriesDevice	68
6.3.18	DCShunt.....	69
6.3.19	DCSwitch.....	69
6.3.20	DCTerminal	70
6.3.21	PerLengthDCLineParameter.....	71
6.3.22	VsCapabilityCurve	71
6.3.23	VsConverter	72
6.3.24	Enumerations	74
6.4	Topology.....	74
6.4.1	BusNameMarker.....	74
6.5	Meas.....	75
6.5.1	General	75
6.5.2	(Operation) Accumulator.....	78
6.5.3	(Operation) AccumulatorLimit	79
6.5.4	(Operation) AccumulatorLimitSet	80
6.5.5	(Operation) AccumulatorReset.....	81
6.5.6	(Operation) AccumulatorValue	82
6.5.7	(Operation) Analog	82
6.5.8	(Operation) AnalogControl(Abstract).....	83
6.5.9	(Operation) AnalogLimit.....	84
6.5.10	(Operation) AnalogLimitSet.....	85
6.5.11	(Operation) AnalogValue	86
6.5.12	(Operation) Command	86
6.5.13	(Operation) Control(Abstract).....	87
6.5.14	(Operation) Discrete	88
6.5.15	(Operation) DiscreteValue	89
6.5.16	(Operation) Limit(Abstract)	90
6.5.17	(Operation) LimitSet(Abstract)	91
6.5.18	(Operation) Measurement(Abstract).....	91
6.5.19	(Operation) MeasurementValue(Abstract).....	93
6.5.20	(Operation) MeasurementValueQuality	94

6.5.21	(Operation) MeasurementValueSource	94
6.5.22	(Operation) Quality61850(Abstract)	95
6.5.23	(Operation) RaiseLowerCommand	96
6.5.24	(Operation) SetPoint	97
6.5.25	(Operation) StringMeasurement	98
6.5.26	(Operation) StringMeasurementValue	99
6.5.27	(Operation) ValueAliasSet	100
6.5.28	(Operation) ValueToAlias	101
6.5.29	Enumerations	101
6.6	Production	102
6.6.1	General	102
6.6.2	(Entsoe) EnergySchedulingType	104
6.6.3	EnergySource	105
6.6.4	FossilFuel	106
6.6.5	GeneratingUnit	107
6.6.6	(Operation) GrossToNetActivePowerCurve	109
6.6.7	HydroGeneratingUnit	110
6.6.8	HydroPowerPlant	111
6.6.9	HydroPump	111
6.6.10	NuclearGeneratingUnit	112
6.6.11	SolarGeneratingUnit	113
6.6.12	ThermalGeneratingUnit	114
6.6.13	WindGeneratingUnit	115
6.6.14	Enumerations	116
6.7	Core	118
6.7.1	General	118
6.7.2	ACDCTerminal(Abstract)	120
6.7.3	BaseVoltage	120
6.7.4	BasicIntervalSchedule(Abstract)	121
6.7.5	(Operation) Bay	121
6.7.6	ConductingEquipment(Abstract)	122
6.7.7	(Operation) ConnectivityNode	123
6.7.8	ConnectivityNodeContainer(Abstract)	124
6.7.9	Curve(Abstract)	124
6.7.10	CurveData	125
6.7.11	Equipment(Abstract)	125
6.7.12	EquipmentContainer(Abstract)	126
6.7.13	GeographicalRegion	127
6.7.14	IdentifiedObject(Abstract)	127
6.7.15	PowerSystemResource(Abstract)	128
6.7.16	RegularIntervalSchedule(Abstract)	128
6.7.17	(Operation) RegularTimePoint	129
6.7.18	ReportingGroup	130
6.7.19	SubGeographicalRegion	130
6.7.20	Substation	131
6.7.21	Terminal	131
6.7.22	VoltageLevel	132
6.7.23	Enumerations	133
6.8	OperationalLimits	134

6.8.1	General	134
6.8.2	(Operation) ActivePowerLimit	136
6.8.3	(Operation) ApparentPowerLimit	137
6.8.4	CurrentLimit	138
6.8.5	OperationalLimit(Abstract)	138
6.8.6	OperationalLimitSet	139
6.8.7	OperationalLimitType	140
6.8.8	VoltageLimit	141
6.8.9	Enumerations	142
6.9	Wires	144
6.9.1	General	144
6.9.2	ACLineSegment	147
6.9.3	AsynchronousMachine	149
6.9.4	Breaker	151
6.9.5	BusbarSection	152
6.9.6	Conductor(Abstract)	153
6.9.7	Connector(Abstract)	154
6.9.8	Disconnecter	154
6.9.9	(ShortCircuit) EarthFaultCompensator(Abstract)	155
6.9.10	EnergyConsumer	156
6.9.11	ExternalNetworkInjection	157
6.9.12	(ShortCircuit,Operation) Ground	160
6.9.13	(ShortCircuit,Operation) GroundDisconnecter	161
6.9.14	(ShortCircuit) GroundingImpedance	162
6.9.15	Junction	163
6.9.16	Line	164
6.9.17	LinearShuntCompensator	165
6.9.18	LoadBreakSwitch	166
6.9.19	(ShortCircuit) MutualCoupling	167
6.9.20	NonlinearShuntCompensator	168
6.9.21	NonlinearShuntCompensatorPoint	169
6.9.22	(ShortCircuit) PetersenCoil	170
6.9.23	PhaseTapChanger(Abstract)	172
6.9.24	PhaseTapChangerAsymmetrical	172
6.9.25	PhaseTapChangerLinear	173
6.9.26	PhaseTapChangerNonLinear(Abstract)	174
6.9.27	PhaseTapChangerSymmetrical	175
6.9.28	PhaseTapChangerTable	176
6.9.29	PhaseTapChangerTablePoint	177
6.9.30	PhaseTapChangerTabular	177
6.9.31	PowerTransformer	178
6.9.32	PowerTransformerEnd	181
6.9.33	ProtectedSwitch(Abstract)	183
6.9.34	RatioTapChanger	184
6.9.35	RatioTapChangerTable	185
6.9.36	RatioTapChangerTablePoint	185
6.9.37	ReactiveCapabilityCurve	186
6.9.38	RegulatingCondEq(Abstract)	187
6.9.39	RegulatingControl	188

6.9.40	(Operation) RegulationSchedule	189
6.9.41	RotatingMachine(Abstract)	190
6.9.42	SeriesCompensator	191
6.9.43	ShuntCompensator(Abstract)	192
6.9.44	StaticVarCompensator	194
6.9.45	Switch	195
6.9.46	(Operation) SwitchSchedule	196
6.9.47	SynchronousMachine	197
6.9.48	TapChanger(Abstract)	201
6.9.49	TapChangerControl	202
6.9.50	TapChangerTablePoint	203
6.9.51	(Operation) TapSchedule	204
6.9.52	TransformerEnd(Abstract)	204
6.9.53	Enumerations	205
6.10	LoadModel	207
6.10.1	General	207
6.10.2	ConformLoad	210
6.10.3	ConformLoadGroup	211
6.10.4	ConformLoadSchedule	212
6.10.5	(Operation) DayType	213
6.10.6	(Operation) EnergyArea(Abstract)	213
6.10.7	(Operation) LoadArea	213
6.10.8	LoadGroup(Abstract)	214
6.10.9	LoadResponseCharacteristic	214
6.10.10	NonConformLoad	216
6.10.11	NonConformLoadGroup	218
6.10.12	NonConformLoadSchedule	219
6.10.13	(Operation) Season	220
6.10.14	(Operation) SeasonDayTypeSchedule(Abstract)	220
6.10.15	(Operation) StationSupply	221
6.10.16	(Operation) SubLoadArea	222
6.11	Equivalents	223
6.11.1	General	223
6.11.2	EquivalentBranch	224
6.11.3	EquivalentEquipment(Abstract)	226
6.11.4	EquivalentInjection	227
6.11.5	EquivalentNetwork	229
6.11.6	EquivalentShunt	229
6.12	ControlArea	230
6.12.1	General	230
6.12.2	ControlArea	232
6.12.3	ControlAreaGeneratingUnit	233
6.12.4	TieFlow	233
6.12.5	Enumerations – ControlAreaTypeKind	234
6.13	Global Used Datatypes	234
6.13.1	ApparentPower	234
6.13.2	ActivePower	234
6.13.3	Voltage	235
6.13.4	Resistance	235

6.13.5	ActivePowerPerCurrentFlow	235
6.13.6	AngleDegrees	236
6.13.7	CurrentFlow	236
6.13.8	Inductance	236
6.13.9	Capacitance	237
6.13.10	Length	237
6.13.11	CapacitancePerLength	237
6.13.12	InductancePerLength	238
6.13.13	ResistancePerLength	238
6.13.14	Simple_Float	239
6.13.15	PerCent	239
6.13.16	AngleRadians	239
6.13.17	Reactance	239
6.13.18	Money	240
6.13.19	Seconds	240
6.13.20	Susceptance	240
6.13.21	Conductance	241
6.13.22	Temperature	241
6.13.23	Frequency	241
6.13.24	RotationSpeed	242
6.13.25	ReactivePower	242
6.13.26	ActivePowerPerFrequency	242
6.13.27	PU	243
6.13.28	VoltagePerReactivePower	243
6.13.29	Enumerations	244
6.13.30	Primitives	253
7	SteadyStateHypothesisProfile	253
7.1	General	253
7.2	(Entsoe) SteadyStateHypothesisVersion(Abstract)	254
7.3	Core	255
7.3.1	General	255
7.3.2	ACDCTerminal(Abstract)	256
7.3.3	ConductingEquipment(Abstract)	257
7.3.4	Equipment(Abstract)	257
7.3.5	IdentifiedObject(Abstract)	257
7.3.6	PowerSystemResource(Abstract)	258
7.3.7	(Description) Terminal	258
7.4	ControlArea	259
7.4.1	(Description) ControlArea	259
7.5	DC	259
7.5.1	General	259
7.5.2	ACDCConverter(Abstract)	260
7.5.3	(Description) ACDCConverterDCTerminal	261
7.5.4	(Description) CsConverter	261
7.5.5	DCBaseTerminal(Abstract)	262
7.5.6	(Description) DCTerminal	262
7.5.7	(Description) VsConverter	263
7.5.8	Enumerations	263
7.6	Equivalent	264

7.6.1	EquivalentEquipment(Abstract)	264
7.6.2	(Description) EquivalentInjection	265
7.7	Generation	265
7.7.1	(Description) GeneratingUnit	265
7.7.2	(Description) HydroGeneratingUnit	266
7.7.3	(Description) NuclearGeneratingUnit	266
7.7.4	(Description) SolarGeneratingUnit	266
7.7.5	(Description) ThermalGeneratingUnit	267
7.7.6	(Description) WindGeneratingUnit	267
7.8	Wires	267
7.8.1	(Description) AsynchronousMachine	267
7.8.2	(Description) Breaker	268
7.8.3	(Description) Disconnecter	268
7.8.4	(Description) EnergyConsumer	269
7.8.5	(Description) EnergySource	269
7.8.6	(Description) ExternalNetworkInjection	270
7.8.7	(Operation,ShortCircuit,Description) GroundDisconnecter	270
7.8.8	(Description) LoadBreakSwitch	270
7.8.9	PhaseTapChanger(Abstract)	271
7.8.10	(Description) PhaseTapChangerAsymmetrical	271
7.8.11	(Description) PhaseTapChangerLinear	271
7.8.12	PhaseTapChangerNonLinear(Abstract)	272
7.8.13	(Description) PhaseTapChangerSymmetrical	272
7.8.14	(Description) PhaseTapChangerTabular	273
7.8.15	ProtectedSwitch(Abstract)	273
7.8.16	(Description) RatioTapChanger	273
7.8.17	RegulatingCondEq(Abstract)	274
7.8.18	RotatingMachine(Abstract)	274
7.8.19	(Description) StaticVarCompensator	275
7.8.20	(Description) Switch	275
7.8.21	(Description) SynchronousMachine	275
7.8.22	(Description) TapChangerControl	276
7.8.23	(Description) LinearShuntCompensator	276
7.8.24	(Description) NonlinearShuntCompensator	277
7.8.25	(Description) RegulatingControl	277
7.8.26	ShuntCompensator(Abstract)	278
7.8.27	TapChanger(Abstract)	278
7.8.28	Enumerations	279
7.9	LoadModel	279
7.9.1	(Description) ConformLoad	279
7.9.2	(Description) NonConformLoad	280
7.9.3	(Operation,Description) StationSupply	280
7.10	Global Used Datatypes	281
7.10.1	Datatypes	281
7.10.2	Enumerations	284
7.10.3	Primitives	286
8	TopologyProfile	287
8.1	General	287
8.2	(Entsoe) TopologyVersion(Abstract)	288

8.3	Core	289
8.3.1	General	289
8.3.2	ACDCTerminal(Abstract)	290
8.3.3	BaseVoltage(Abstract)	290
8.3.4	(Operation,Description) ConnectivityNode	291
8.3.5	ConnectivityNodeContainer(Abstract)	291
8.3.6	ReportingGroup(Abstract)	291
8.3.7	IdentifiedObject(Abstract)	291
8.3.8	(Description) Terminal	292
8.4	DC	293
8.4.1	General	293
8.4.2	(Description) ACDCConverterDCTerminal	293
8.4.3	DCBaseTerminal(Abstract)	294
8.4.4	DCEquipmentContainer(Abstract)	295
8.4.5	(Description) DCNode	295
8.4.6	(Description) DCTerminal	295
8.4.7	DCTopologicalNode	296
8.5	Topology	297
8.5.1	TopologicalNode	297
8.6	Global Used Datatypes – Primitives	297
8.6.1	String	297
8.6.2	Date	298
9	StateVariablesProfile	298
9.1	General	298
9.2	(Entsoe) StateVariablesVersion(Abstract)	299
9.3	Core	300
9.3.1	General	300
9.3.2	ACDCTerminal(Abstract)	301
9.3.3	ConductingEquipment(Abstract)	301
9.3.4	IdentifiedObject(Abstract)	301
9.3.5	Terminal(Abstract)	302
9.4	DC	302
9.4.1	General	302
9.4.2	ACDCConverter(Abstract)	303
9.4.3	(Description) CsConverter	304
9.4.4	DCTopologicalIsland	304
9.4.5	(Description) VsConverter	304
9.5	StateVariables	305
9.5.1	(Operation) SvStatus	305
9.5.2	SvInjection	305
9.5.3	SvPowerFlow	306
9.5.4	SvShuntCompensatorSections	307
9.5.5	SvTapStep	307
9.5.6	SvVoltage	308
9.6	Topology	308
9.6.1	General	308
9.6.2	DCTopologicalNode(Abstract)	309
9.6.3	TopologicalNode(Abstract)	309
9.6.4	TopologicalIsland	309

9.7	Wires	310
9.7.1	General	310
9.7.2	ShuntCompensator(Abstract).....	310
9.7.3	TapChanger(Abstract)	310
9.8	Global Used Datatypes	311
9.8.1	Datatypes	311
9.8.2	Enumerations	313
9.8.3	Primitives	314
10	DiagramLayoutProfile	314
10.1	General.....	314
10.2	(Entsoe) DiagramLayoutVersion(Abstract)	315
10.3	DiagramLayout.....	316
10.3.1	DiagramStyle	316
10.3.2	Diagram.....	317
10.3.3	DiagramObject.....	317
10.3.4	DiagramObjectGluePoint	319
10.3.5	DiagramObjectPoint.....	319
10.3.6	DiagramObjectStyle	319
10.3.7	TextDiagramObject.....	320
10.3.8	VisibilityLayer	320
10.4	Core	321
10.4.1	IdentifiedObject(Abstract).....	321
10.5	Global Used Datatypes	322
10.5.1	Datatypes	322
10.5.2	Enumerations	322
10.5.3	Primitives	324
11	GeographicalLocationProfile.....	324
11.1	General.....	324
11.2	(Entsoe) GeographicalLocationVersion(Abstract)	325
11.3	Common	326
11.3.1	CoordinateSystem	326
11.3.2	Location	327
11.3.3	PositionPoint	327
11.4	Core	328
11.4.1	General	328
11.4.2	IdentifiedObject(Abstract)	328
11.4.3	PowerSystemResource(Abstract).....	329
11.5	Global Used Datatypes – Primitives	329
11.5.1	String	329
11.5.2	Date	329
11.5.3	Integer.....	329

Figure 1	– diagram EquipmentBoundaryProfile	29
----------	--	----

Figure 2	– diagram TopologyBoundaryProfile.....	43
----------	--	----

Figure 3	– diagram EquipmentProfile	49
----------	----------------------------------	----

Figure 4	– diagram ACDCConverter	51
----------	-------------------------------	----

Figure 5	– diagram DCContainment	52
----------	-------------------------------	----

Figure 6	– diagram DCLineModel.....	53
----------	----------------------------	----

Figure 7 – diagram DCEquipment	53
Figure 8 – diagram ACDCConnectivityModel.....	54
Figure 9 – diagram Control	76
Figure 10 – diagram Meas	77
Figure 11 – diagram MeasNote	78
Figure 12 – diagram Production	103
Figure 13 – diagram ProductionNotes	104
Figure 14 – diagram ACDCTerminal.....	118
Figure 15 – diagram CoreNotes	119
Figure 16 – diagram OperationalLimits.....	135
Figure 17 – diagram OperationalLimitsNotes.....	136
Figure 18 – diagram ShuntCompensator	144
Figure 19 – diagram Wires.....	145
Figure 20 – diagram WiresNotes	145
Figure 21 – diagram TapChanger.....	146
Figure 22 – diagram Transformer.....	147
Figure 23 – diagram LoadModel.....	208
Figure 24 – diagram LoadModelNotes.....	209
Figure 25 – diagram Equivalentents.....	224
Figure 26 – diagram ControlAreaNotes.....	231
Figure 27 – diagram ControlArea	231
Figure 28 – diagram SteadyStateHypothesisProfile.....	254
Figure 29 – diagram Core.....	256
Figure 30 – diagram DC.....	260
Figure 31 – diagram TopologyProfileNotes	287
Figure 32 – diagram TopologyProfile.....	288
Figure 33 – diagram Core.....	290
Figure 34 – diagram DC.....	293
Figure 35 – diagram StateVariablesProfile	299
Figure 36 – diagram Core.....	301
Figure 37 – diagram DC.....	303
Figure 38 – diagram Topology	309
Figure 39 – diagram Wires.....	310
Figure 40 – diagram DiagramLayoutProfile	315
Figure 41 – diagram GeographicalLocationProfile.....	325
Figure 42 – diagram Core	328
Table 1 – Attributes of EquipmentBoundaryProfile::EquipmentBoundaryVersion	30
Table 2 – Attributes of Core::ConductingEquipment	31
Table 3 – Association ends of Core::Equipment with other classes	31
Table 4 – Attributes of Core::ConnectivityNode	32
Table 5 – Association ends of Core::ConnectivityNode with other classes.....	33
Table 6 – Attributes of Core::ConnectivityNodeContainer	33

Table 7 – Attributes of Core::Equipment.....	34
Table 8 – Association ends of Core::Equipment with other classes	34
Table 9 – Attributes of Core::EquipmentContainer	34
Table 10 – Attributes of Core::PowerSystemResource	35
Table 11 – Attributes of Core::BaseVoltage.....	35
Table 12 – Attributes of Core::GeographicalRegion.....	36
Table 13 – Attributes of Core::IdentifiedObject.....	36
Table 14 – Attributes of Core::SubGeographicalRegion	37
Table 15 – Association ends of Core::SubGeographicalRegion with other classes	37
Table 16 – Attributes of Wires::Connector.....	37
Table 17 – Association ends of Core::Equipment with other classes	38
Table 18 – Attributes of Wires::EnergySchedulingType.....	38
Table 19 – Attributes of Wires::EnergySource.....	38
Table 20 – Association ends of Wires::EnergySource with other classes.....	39
Table 21 – Attributes of Wires::Junction.....	39
Table 22 – Association ends of Core::Equipment with other classes	39
Table 23 – Attributes of Wires::Line	40
Table 24 – Association ends of Wires::Line with other classes.....	40
Table 25 – Attributes of DomainProfile::Voltage.....	40
Table 26 – Attributes of TopologyBoundaryProfile::TopologyBoundaryVersion	44
Table 27 – Attributes of Core::BaseVoltage.....	45
Table 28 – Attributes of Core::IdentifiedObject.....	46
Table 29 – Attributes of Topology::TopologicalNode	47
Table 30 – Association ends of Topology::TopologicalNode with other classes	48
Table 31 – Attributes of EquipmentProfile::EquipmentVersion	50
Table 32 – Attributes of DC::ACDCConverter.....	55
Table 33 – Association ends of DC::ACDCConverter with other classes.....	56
Table 34 – Attributes of DC::ACDCConverterDCTerminal	56
Table 35 – Association ends of DC::ACDCConverterDCTerminal with other classes	57
Table 36 – Attributes of DC::CsConverter	58
Table 37 – Association ends of DC::ACDCConverter with other classes.....	59
Table 38 – Attributes of DC::DCBaseTerminal	59
Table 39 – Association ends of DC::DCBaseTerminal with other classes	60
Table 40 – Attributes of DC::DCBreaker.....	60
Table 41 – Association ends of Core::Equipment with other classes	60
Table 42 – Attributes of DC::DCBusbar	61
Table 43 – Association ends of Core::Equipment with other classes	61
Table 44 – Attributes of DC::DCChopper.....	61
Table 45 – Association ends of Core::Equipment with other classes	62
Table 46 – Attributes of DC::DCConductingEquipment.....	62
Table 47 – Association ends of Core::Equipment with other classes	62
Table 48 – Attributes of DC::DCConverterUnit	63
Table 49 – Association ends of DC::DCConverterUnit with other classes	63

Table 50 – Attributes of DC::DCDisconnector.....	64
Table 51 – Association ends of Core::Equipment with other classes	64
Table 52 – Attributes of DC::DCEquipmentContainer	64
Table 53 – Attributes of DC::DCGround	65
Table 54 – Association ends of Core::Equipment with other classes	65
Table 55 – Attributes of DC::DCLine	66
Table 56 – Association ends of DC::DCLine with other classes	66
Table 57 – Attributes of DC::DCLineSegment	67
Table 58 – Association ends of DC::DCLineSegment with other classes	67
Table 59 – Attributes of DC::DCNode.....	68
Table 60 – Association ends of DC::DCNode with other classes	68
Table 61 – Attributes of DC::DCSeriesDevice	68
Table 62 – Association ends of Core::Equipment with other classes	69
Table 63 – Attributes of DC::DCShunt.....	69
Table 64 – Association ends of Core::Equipment with other classes.....	69
Table 65 – Attributes of DC::DCSwitch.....	70
Table 66 – Association ends of Core::Equipment with other classes	70
Table 67 – Attributes of DC::DCTerminal	70
Table 68 – Association ends of DC::DCTerminal with other classes	71
Table 69 – Attributes of DC::PerLengthDCLineParameter.....	71
Table 70 – Attributes of DC::VsCapabilityCurve.....	72
Table 71 – Attributes of DC::VsConverter	73
Table 72 – Association ends of DC::VsConverter with other classes	74
Table 73 – Attributes of Topology::BusNameMarker.....	75
Table 74 – Association ends of Topology::BusNameMarker with other classes	75
Table 75 – Attributes of Meas::Accumulator	79
Table 76 – Association ends of Meas::Measurement with other classes	79
Table 77 – Attributes of Meas::AccumulatorLimit.....	80
Table 78 – Association ends of Meas::AccumulatorLimit with other classes	80
Table 79 – Attributes of Meas::AccumulatorLimitSet	80
Table 80 – Association ends of Meas::AccumulatorLimitSet with other classes	81
Table 81 – Attributes of Meas::AccumulatorReset	81
Table 82 – Association ends of Meas::AccumulatorReset with other classes	81
Table 83 – Attributes of Meas::AccumulatorValue	82
Table 84 – Association ends of Meas::AccumulatorValue with other classes	82
Table 85 – Attributes of Meas::Analog	83
Table 86 – Association ends of Meas::Measurement with other classes	83
Table 87 – Attributes of Meas::AnalogControl	84
Table 88 – Association ends of Meas::AnalogControl with other classes	84
Table 89 – Attributes of Meas::AnalogLimit	85
Table 90 – Association ends of Meas::AnalogLimit with other classes	85
Table 91 – Attributes of Meas::AnalogLimitSet	85
Table 92 – Association ends of Meas::AnalogLimitSet with other classes.....	86

Table 93 – Attributes of Meas::AnalogValue.....	86
Table 94 – Association ends of Meas::AnalogValue with other classes	86
Table 95 – Attributes of Meas::Command.....	87
Table 96 – Association ends of Meas::Command with other classes	87
Table 97 – Attributes of Meas::Control.....	88
Table 98 – Association ends of Meas::Control with other classes.....	88
Table 99 – Attributes of Meas::Discrete	89
Table 100 – Association ends of Meas::Discrete with other classes	89
Table 101 – Attributes of Meas::DiscreteValue.....	90
Table 102 – Association ends of Meas::DiscreteValue with other classes	90
Table 103 – Attributes of Meas::Limit.....	90
Table 104 – Attributes of Meas::LimitSet.....	91
Table 105 – Attributes of Meas::Measurement	92
Table 106 – Association ends of Meas::Measurement with other classes.....	93
Table 107 – Attributes of Meas::MeasurementValue	93
Table 108 – Association ends of Meas::MeasurementValue with other classes	93
Table 109 – Attributes of Meas::MeasurementValueQuality.....	94
Table 110 – Association ends of Meas::MeasurementValueQuality with other classes	94
Table 111 – Attributes of Meas::MeasurementValueSource.....	95
Table 112 – Attributes of Meas::Quality61850.....	96
Table 113 – Attributes of Meas::RaiseLowerCommand	97
Table 114 – Association ends of Meas::RaiseLowerCommand with other classes	97
Table 115 – Attributes of Meas::SetPoint.....	98
Table 116 – Association ends of Meas::AnalogControl with other classes	98
Table 117 – Attributes of Meas::StringMeasurement.....	99
Table 118 – Association ends of Meas::Measurement with other classes.....	99
Table 119 – Attributes of Meas::StringMeasurementValue	100
Table 120 – Association ends of Meas::StringMeasurementValue with other classes	100
Table 121 – Attributes of Meas::ValueAliasSet.....	101
Table 122 – Attributes of Meas::ValueToAlias	101
Table 123 – Association ends of Meas::ValueToAlias with other classes.....	101
Table 124 – Attributes of Production::EnergySchedulingType	104
Table 125 – Attributes of Production::EnergySource	105
Table 126 – Association ends of Production::EnergySource with other classes	106
Table 127 – Attributes of Production::FossilFuel	106
Table 128 – Association ends of Production::FossilFuel with other classes	106
Table 129 – Attributes of Production::GeneratingUnit.....	108
Table 130 – Association ends of Core::Equipment with other classes	109
Table 131 – Attributes of Production::GrossToNetActivePowerCurve	109
Table 132 – Association ends of Production::GrossToNetActivePowerCurve with other classes	110
Table 133 – Attributes of Production::HydroGeneratingUnit	110
Table 134 – Association ends of Production::HydroGeneratingUnit with other classes	111

Table 135 – Attributes of Production::HydroPowerPlant	111
Table 136 – Attributes of Production::HydroPump	112
Table 137 – Association ends of Production::HydroPump with other classes	112
Table 138 – Attributes of Production::NuclearGeneratingUnit	113
Table 139 – Association ends of Core::Equipment with other classes	113
Table 140 – Attributes of Production::SolarGeneratingUnit.....	114
Table 141 – Association ends of Core::Equipment with other classes	114
Table 142 – Attributes of Production::ThermalGeneratingUnit	115
Table 143 – Association ends of Core::Equipment with other classes	115
Table 144 – Attributes of Production::WindGeneratingUnit.....	116
Table 145 – Association ends of Core::Equipment with other classes	116
Table 146 – Attributes of Core::ACDCTerminal	120
Table 147 – Association ends of Core::ACDCTerminal with other classes	120
Table 148 – Attributes of Core::BaseVoltage.....	121
Table 149 – Attributes of Core::BasicIntervalSchedule.....	121
Table 150 – Attributes of Core::Bay	122
Table 151 – Association ends of Core::Bay with other classes	122
Table 152 – Attributes of Core::ConductingEquipment	123
Table 153 – Association ends of Core::ConductingEquipment with other classes	123
Table 154 – Attributes of Core::ConnectivityNode.....	124
Table 155 – Association ends of Core::ConnectivityNode with other classes	124
Table 156 – Attributes of Core::ConnectivityNodeContainer	124
Table 157 – Attributes of Core::Curve.....	125
Table 158 – Attributes of Core::CurveData.....	125
Table 159 – Association ends of Core::CurveData with other classes	125
Table 160 – Attributes of Core::Equipment.....	126
Table 161 – Association ends of Core::Equipment with other classes	126
Table 162 – Attributes of Core::EquipmentContainer.....	127
Table 163 – Attributes of Core::GeographicalRegion.....	127
Table 164 – Attributes of Core::IdentifiedObject.....	128
Table 165 – Attributes of Core::PowerSystemResource	128
Table 166 – Attributes of Core::RegularIntervalSchedule	129
Table 167 – Attributes of Core::RegularTimePoint	129
Table 168 – Association ends of Core::RegularTimePoint with other classes	130
Table 169 – Attributes of Core::ReportingGroup.....	130
Table 170 – Attributes of Core::SubGeographicalRegion.....	130
Table 171 – Association ends of Core::SubGeographicalRegion with other classes	131
Table 172 – Attributes of Core::Substation.....	131
Table 173 – Association ends of Core::Substation with other classes	131
Table 174 – Attributes of Core::Terminal.....	132
Table 175 – Association ends of Core::Terminal with other classes	132
Table 176 – Attributes of Core::VoltageLevel	133
Table 177 – Association ends of Core::VoltageLevel with other classes	133

Table 178 – Attributes of OperationalLimits::ActivePowerLimit	136
Table 179 – Association ends of OperationalLimits::OperationalLimit with other classes	137
Table 180 – Attributes of OperationalLimits::ApparentPowerLimit	137
Table 181 – Association ends of OperationalLimits::OperationalLimit with other classes	137
Table 182 – Attributes of OperationalLimits::CurrentLimit.....	138
Table 183 – Association ends of OperationalLimits::OperationalLimit with other classes	138
Table 184 – Attributes of OperationalLimits::OperationalLimit	139
Table 185 – Association ends of OperationalLimits::OperationalLimit with other classes	139
Table 186 – Attributes of OperationalLimits::OperationalLimitSet	140
Table 187 – Association ends of OperationalLimits::OperationalLimitSet with other classes	140
Table 188 – Attributes of OperationalLimits::OperationalLimitType.....	141
Table 189 – Attributes of OperationalLimits::VoltageLimit	141
Table 190 – Association ends of OperationalLimits::OperationalLimit with other classes	142
Table 191 – Attributes of Wires::ACLineSegment.....	148
Table 192 – Association ends of Core::ConductingEquipment with other classes	149
Table 193 – Attributes of Wires::AsynchronousMachine	150
Table 194 – Association ends of Wires::RotatingMachine with other classes.....	151
Table 195 – Attributes of Wires::Breaker.....	151
Table 196 – Association ends of Core::ConductingEquipment with other classes	152
Table 197 – Attributes of Wires::BusbarSection	152
Table 198 – Association ends of Core::ConductingEquipment with other classes	153
Table 199 – Attributes of Wires::Conductor.....	153
Table 200 – Association ends of Core::ConductingEquipment with other classes	153
Table 201 – Attributes of Wires::Connector.....	154
Table 202 – Association ends of Core::ConductingEquipment with other classes	154
Table 203 – Attributes of Wires::Disconnecter.....	155
Table 204 – Association ends of Core::ConductingEquipment with other classes	155
Table 205 – Attributes of Wires::EarthFaultCompensator	156
Table 206 – Association ends of Core::ConductingEquipment with other classes	156
Table 207 – Attributes of Wires::EnergyConsumer	157
Table 208 – Association ends of Wires::EnergyConsumer with other classes.....	157
Table 209 – Attributes of Wires::ExternalNetworkInjection	159
Table 210 – Association ends of Wires::RegulatingCondEq with other classes.....	160
Table 211 – Attributes of Wires::Ground	161
Table 212 – Association ends of Core::ConductingEquipment with other classes	161
Table 213 – Attributes of Wires::GroundDisconnecter	162
Table 214 – Association ends of Core::ConductingEquipment with other classes	162
Table 215 – Attributes of Wires::GroundingImpedance.....	163
Table 216 – Association ends of Core::ConductingEquipment with other classes	163
Table 217 – Attributes of Wires::Junction.....	163
Table 218 – Association ends of Core::ConductingEquipment with other classes	164
Table 219 – Attributes of Wires::Line	164

Table 220 – Association ends of Wires::Line with other classes	164
Table 221 – Attributes of Wires::LinearShuntCompensator	165
Table 222 – Association ends of Wires::RegulatingCondEq with other classes.....	166
Table 223 – Attributes of Wires::LoadBreakSwitch	166
Table 224 – Association ends of Core::ConductingEquipment with other classes	167
Table 225 – Attributes of Wires::MutualCoupling	168
Table 226 – Association ends of Wires::MutualCoupling with other classes	168
Table 227 – Attributes of Wires::NonlinearShuntCompensator	169
Table 228 – Association ends of Wires::RegulatingCondEq with other classes.....	169
Table 229 – Attributes of Wires::NonlinearShuntCompensatorPoint	170
Table 230 – Association ends of Wires::NonlinearShuntCompensatorPoint with other classes	170
Table 231 – Attributes of Wires::PetersenCoil.....	171
Table 232 – Association ends of Core::ConductingEquipment with other classes	171
Table 233 – Attributes of Wires::PhaseTapChanger	172
Table 234 – Association ends of Wires::PhaseTapChanger with other classes.....	172
Table 235 – Attributes of Wires::PhaseTapChangerAsymmetrical.....	173
Table 236 – Association ends of Wires::PhaseTapChanger with other classes.....	173
Table 237 – Attributes of Wires::PhaseTapChangerLinear	174
Table 238 – Association ends of Wires::PhaseTapChanger with other classes.....	174
Table 239 – Attributes of Wires::PhaseTapChangerNonLinear	175
Table 240 – Association ends of Wires::PhaseTapChanger with other classes.....	175
Table 241 – Attributes of Wires::PhaseTapChangerSymmetrical	176
Table 242 – Association ends of Wires::PhaseTapChanger with other classes.....	176
Table 243 – Attributes of Wires::PhaseTapChangerTable	177
Table 244 – Attributes of Wires::PhaseTapChangerTablePoint	177
Table 245 – Association ends of Wires::PhaseTapChangerTablePoint with other classes	177
Table 246 – Attributes of Wires::PhaseTapChangerTabular	178
Table 247 – Association ends of Wires::PhaseTapChangerTabular with other classes	178
Table 248 – Attributes of Wires::PowerTransformer	180
Table 249 – Association ends of Core::ConductingEquipment with other classes	181
Table 250 – Attributes of Wires::PowerTransformerEnd	182
Table 251 – Association ends of Wires::PowerTransformerEnd with other classes	183
Table 252 – Attributes of Wires::ProtectedSwitch.....	183
Table 253 – Association ends of Core::ConductingEquipment with other classes	184
Table 254 – Attributes of Wires::RatioTapChanger.....	184
Table 255 – Association ends of Wires::RatioTapChanger with other classes	185
Table 256 – Attributes of Wires::RatioTapChangerTable	185
Table 257 – Attributes of Wires::RatioTapChangerTablePoint	186
Table 258 – Association ends of Wires::RatioTapChangerTablePoint with other classes.....	186
Table 259 – Attributes of Wires::ReactiveCapabilityCurve.....	187
Table 260 – Attributes of Wires::RegulatingCondEq.....	187
Table 261 – Association ends of Wires::RegulatingCondEq with other classes.....	188

Table 262 – Attributes of Wires::RegulatingControl	188
Table 263 – Association ends of Wires::RegulatingControl with other classes	189
Table 264 – Attributes of Wires::RegulationSchedule	189
Table 265 – Association ends of Wires::RegulationSchedule with other classes	190
Table 266 – Attributes of Wires::RotatingMachine	190
Table 267 – Association ends of Wires::RotatingMachine with other classes	191
Table 268 – Attributes of Wires::SeriesCompensator	192
Table 269 – Association ends of Core::ConductingEquipment with other classes	192
Table 270 – Attributes of Wires::ShuntCompensator	193
Table 271 – Association ends of Wires::RegulatingCondEq with other classes	193
Table 272 – Attributes of Wires::StaticVarCompensator	194
Table 273 – Association ends of Wires::RegulatingCondEq with other classes	195
Table 274 – Attributes of Wires::Switch	196
Table 275 – Association ends of Core::ConductingEquipment with other classes	196
Table 276 – Attributes of Wires::SwitchSchedule	197
Table 277 – Association ends of Wires::SwitchSchedule with other classes	197
Table 278 – Attributes of Wires::SynchronousMachine	199
Table 279 – Association ends of Wires::SynchronousMachine with other classes	201
Table 280 – Attributes of Wires::TapChanger	202
Table 281 – Association ends of Wires::TapChanger with other classes	202
Table 282 – Attributes of Wires::TapChangerControl	203
Table 283 – Association ends of Wires::RegulatingControl with other classes	203
Table 284 – Attributes of Wires::TapChangerTablePoint	203
Table 285 – Attributes of Wires::TapSchedule	204
Table 286 – Association ends of Wires::TapSchedule with other classes	204
Table 287 – Attributes of Wires::TransformerEnd	205
Table 288 – Association ends of Wires::TransformerEnd with other classes	205
Table 289 – Attributes of LoadModel::ConformLoad	210
Table 290 – Association ends of LoadModel::ConformLoad with other classes	211
Table 291 – Attributes of LoadModel::ConformLoadGroup	211
Table 292 – Association ends of LoadModel::LoadGroup with other classes	211
Table 293 – Attributes of LoadModel::ConformLoadSchedule	212
Table 294 – Association ends of LoadModel::ConformLoadSchedule with other classes	212
Table 295 – Attributes of LoadModel::DayType	213
Table 296 – Attributes of LoadModel::EnergyArea	213
Table 297 – Attributes of LoadModel::LoadArea	214
Table 298 – Attributes of LoadModel::LoadGroup	214
Table 299 – Association ends of LoadModel::LoadGroup with other classes	214
Table 300 – Attributes of LoadModel::LoadResponseCharacteristic	216
Table 301 – Attributes of LoadModel::NonConformLoad	217
Table 302 – Association ends of LoadModel::NonConformLoad with other classes	218
Table 303 – Attributes of LoadModel::NonConformLoadGroup	218
Table 304 – Association ends of LoadModel::LoadGroup with other classes	219

Table 305 – Attributes of LoadModel::NonConformLoadSchedule	219
Table 306 – Association ends of LoadModel::NonConformLoadSchedule with other classes	220
Table 307 – Attributes of LoadModel::Season	220
Table 308 – Attributes of LoadModel::SeasonDayTypeSchedule	221
Table 309 – Association ends of LoadModel::SeasonDayTypeSchedule with other classes	221
Table 310 – Attributes of LoadModel::StationSupply	222
Table 311 – Association ends of Wires::EnergyConsumer with other classes	222
Table 312 – Attributes of LoadModel::SubLoadArea	223
Table 313 – Association ends of LoadModel::SubLoadArea with other classes	223
Table 314 – Attributes of Equivalents::EquivalentBranch	225
Table 315 – Association ends of Equivalents::EquivalentEquipment with other classes	226
Table 316 – Attributes of Equivalents::EquivalentEquipment	227
Table 317 – Association ends of Equivalents::EquivalentEquipment with other classes	227
Table 318 – Attributes of Equivalents::EquivalentInjection	228
Table 319 – Association ends of Equivalents::EquivalentInjection with other classes	229
Table 320 – Attributes of Equivalents::EquivalentNetwork	229
Table 321 – Attributes of Equivalents::EquivalentShunt	230
Table 322 – Association ends of Equivalents::EquivalentEquipment with other classes	230
Table 323 – Attributes of ControlArea::ControlArea	232
Table 324 – Association ends of ControlArea::ControlArea with other classes	232
Table 325 – Attributes of ControlArea::ControlAreaGeneratingUnit	233
Table 326 – Association ends of ControlArea::ControlAreaGeneratingUnit with other classes	233
Table 327 – Attributes of ControlArea::TieFlow	233
Table 328 – Association ends of ControlArea::TieFlow with other classes	234
Table 329 – Attributes of DomainProfile::ApparentPower	234
Table 330 – Attributes of DomainProfile::ActivePower	235
Table 331 – Attributes of DomainProfile::Voltage	235
Table 332 – Attributes of DomainProfile::Resistance	235
Table 333 – Attributes of DomainProfile::ActivePowerPerCurrentFlow	236
Table 334 – Attributes of DomainProfile::AngleDegrees	236
Table 335 – Attributes of DomainProfile::CurrentFlow	236
Table 336 – Attributes of DomainProfile::Inductance	237
Table 337 – Attributes of DomainProfile::Capacitance	237
Table 338 – Attributes of DomainProfile::Length	237
Table 339 – Attributes of DomainProfile::CapacitancePerLength	238
Table 340 – Attributes of DomainProfile::InductancePerLength	238
Table 341 – Attributes of DomainProfile::ResistancePerLength	238
Table 342 – Attributes of DomainProfile::Simple_Float	239
Table 343 – Attributes of DomainProfile::PerCent	239
Table 344 – Attributes of DomainProfile::AngleRadians	239
Table 345 – Attributes of DomainProfile::Reactance	240

Table 346 – Attributes of DomainProfile::Money.....	240
Table 347 – Attributes of DomainProfile::Seconds.....	240
Table 348 – Attributes of DomainProfile::Susceptance.....	241
Table 349 – Attributes of DomainProfile::Conductance.....	241
Table 350 – Attributes of DomainProfile::Temperature.....	241
Table 351 – Attributes of DomainProfile::Frequency.....	242
Table 352 – Attributes of DomainProfile::RotationSpeed.....	242
Table 353 – Attributes of DomainProfile::ReactivePower.....	242
Table 354 – Attributes of DomainProfile::ActivePowerPerFrequency.....	243
Table 355 – Attributes of DomainProfile::PU.....	243
Table 356 – Attributes of DomainProfile::VoltagePerReactivePower.....	243
Table 357 – Attributes of SteadyStateHypothesisProfile::SteadyStateHypothesisVersion.....	255
Table 358 – Attributes of Core::ACDCTerminal.....	257
Table 359 – Attributes of Core::ConductingEquipment.....	257
Table 360 – Attributes of Core::Equipment.....	257
Table 361 – Attributes of Core::IdentifiedObject.....	258
Table 362 – Attributes of Core::PowerSystemResource.....	258
Table 363 – Attributes of Core::Terminal.....	259
Table 364 – Attributes of ControlArea::ControlArea.....	259
Table 365 – Attributes of DC::ACDCCConverter.....	261
Table 366 – Attributes of DC::ACDCCConverterDCTerminal.....	261
Table 367 – Attributes of DC::CsConverter.....	262
Table 368 – Attributes of DC::DCBaseTerminal.....	262
Table 369 – Attributes of DC::DCTerminal.....	263
Table 370 – Attributes of DC::VsConverter.....	263
Table 371 – Attributes of Equivalents::EquivalentEquipment.....	265
Table 372 – Attributes of Equivalents::EquivalentInjection.....	265
Table 373 – Attributes of Generation::GeneratingUnit.....	266
Table 374 – Attributes of Generation::HydroGeneratingUnit.....	266
Table 375 – Attributes of Generation::NuclearGeneratingUnit.....	266
Table 376 – Attributes of Generation::SolarGeneratingUnit.....	267
Table 377 – Attributes of Generation::ThermalGeneratingUnit.....	267
Table 378 – Attributes of Generation::WindGeneratingUnit.....	267
Table 379 – Attributes of Wires::AsynchronousMachine.....	268
Table 380 – Attributes of Wires::Breaker.....	268
Table 381 – Attributes of Wires::Disconnecter.....	269
Table 382 – Attributes of Wires::EnergyConsumer.....	269
Table 383 – Attributes of Wires::EnergySource.....	269
Table 384 – Attributes of Wires::ExternalNetworkInjection.....	270
Table 385 – Attributes of Wires::GroundDisconnecter.....	270
Table 386 – Attributes of Wires::LoadBreakSwitch.....	271
Table 387 – Attributes of Wires::PhaseTapChanger.....	271

Table 388 – Attributes of Wires::PhaseTapChangerAsymmetrical	271
Table 389 – Attributes of Wires::PhaseTapChangerLinear	272
Table 390 – Attributes of Wires::PhaseTapChangerNonLinear	272
Table 391 – Attributes of Wires::PhaseTapChangerSymmetrical	273
Table 392 – Attributes of Wires::PhaseTapChangerTabular	273
Table 393 – Attributes of Wires::ProtectedSwitch	273
Table 394 – Attributes of Wires::RatioTapChanger	274
Table 395 – Attributes of Wires::RegulatingCondEq	274
Table 396 – Attributes of Wires::RotatingMachine	274
Table 397 – Attributes of Wires::StaticVarCompensator	275
Table 398 – Attributes of Wires::Switch	275
Table 399 – Attributes of Wires::SynchronousMachine	276
Table 400 – Attributes of Wires::TapChangerControl	276
Table 401 – Attributes of Wires::LinearShuntCompensator	277
Table 402 – Attributes of Wires::NonlinearShuntCompensator	277
Table 403 – Attributes of Wires::RegulatingControl	278
Table 404 – Attributes of Wires::ShuntCompensator	278
Table 405 – Attributes of Wires::TapChanger	279
Table 406 – Attributes of LoadModel::ConformLoad	280
Table 407 – Attributes of LoadModel::NonConformLoad	280
Table 408 – Attributes of LoadModel::StationSupply	280
Table 409 – Attributes of DomainProfile::ActivePower	281
Table 410 – Attributes of DomainProfile::ReactivePower	281
Table 411 – Attributes of DomainProfile::Voltage	282
Table 412 – Attributes of DomainProfile::AngleDegrees	282
Table 413 – Attributes of DomainProfile::CurrentFlow	282
Table 414 – Attributes of DomainProfile::PU	283
Table 415 – Attributes of DomainProfile::Resistance	283
Table 416 – Attributes of DomainProfile::PerCent	283
Table 417 – Attributes of DomainProfile::Simple_Float	284
Table 418 – Attributes of TopologyProfile::TopologyVersion	289
Table 419 – Attributes of Core::ACDCTerminal	290
Table 420 – Attributes of Core::ReportingGroup	291
Table 421 – Attributes of Core::IdentifiedObject	292
Table 422 – Attributes of Core::Terminal	292
Table 423 – Association ends of Core::Terminal with other classes	293
Table 424 – Attributes of DC::ACDCConverterDCTerminal	294
Table 425 – Association ends of DC::DCBaseTerminal with other classes	294
Table 426 – Attributes of DC::DCBaseTerminal	294
Table 427 – Association ends of DC::DCBaseTerminal with other classes	294
Table 428 – Attributes of DC::DCNode	295
Table 429 – Association ends of DC::DCNode with other classes	295
Table 430 – Attributes of DC::DCTerminal	296

Table 431 – Association ends of DC::DCBaseTerminal with other classes	296
Table 432 – Attributes of DC::DCTopologicalNode	296
Table 433 – Association ends of DC::DCTopologicalNode with other classes.....	296
Table 434 – Attributes of Topology::TopologicalNode	297
Table 435 – Association ends of Topology::TopologicalNode with other classes	297
Table 436 – Attributes of StateVariablesProfile::StateVariablesVersion.....	300
Table 437 – Attributes of Core::ACDCTerminal	301
Table 438 – Attributes of Core::IdentifiedObject.....	302
Table 439 – Attributes of Core::Terminal.....	302
Table 440 – Attributes of DC::ACDCConverter	303
Table 441 – Attributes of DC::CsConverter	304
Table 442 – Attributes of DC::DCTopologicalIsland.....	304
Table 443 – Association ends of DC::DCTopologicalIsland with other classes	304
Table 444 – Attributes of DC::VsConverter.....	305
Table 445 – Attributes of StateVariables::SvStatus	305
Table 446 – Association ends of StateVariables::SvStatus with other classes	305
Table 447 – Attributes of StateVariables::SvInjection	306
Table 448 – Association ends of StateVariables::SvInjection with other classes.....	306
Table 449 – Attributes of StateVariables::SvPowerFlow	306
Table 450 – Association ends of StateVariables::SvPowerFlow with other classes.....	307
Table 451 – Attributes of StateVariables::SvShuntCompensatorSections	307
Table 452 – Association ends of StateVariables::SvShuntCompensatorSections with other classes	307
Table 453 – Attributes of StateVariables::SvTapStep	307
Table 454 – Association ends of StateVariables::SvTapStep with other classes.....	308
Table 455 – Attributes of StateVariables::SvVoltage	308
Table 456 – Association ends of StateVariables::SvVoltage with other classes	308
Table 457 – Attributes of Topology::DCTopologicalNode.....	309
Table 458 – Attributes of Topology::TopologicalIsland	310
Table 459 – Association ends of Topology::TopologicalIsland with other classes	310
Table 460 – Attributes of DomainProfile::CurrentFlow.....	311
Table 461 – Attributes of DomainProfile::ActivePower.....	311
Table 462 – Attributes of DomainProfile::Voltage.....	312
Table 463 – Attributes of DomainProfile::AngleDegrees.....	312
Table 464 – Attributes of DomainProfile::ReactivePower.....	312
Table 465 – Attributes of DomainProfile::Simple_Float.....	313
Table 466 – Attributes of DiagramLayoutProfile::DiagramLayoutVersion	316
Table 467 – Attributes of DiagramLayout::DiagramStyle	317
Table 468 – Attributes of DiagramLayout::Diagram	317
Table 469 – Association ends of DiagramLayout::Diagram with other classes	317
Table 470 – Attributes of DiagramLayout::DiagramObject	318
Table 471 – Association ends of DiagramLayout::DiagramObject with other classes	318
Table 472 – Attributes of DiagramLayout::DiagramObjectPoint	319

Table 473 – Association ends of DiagramLayout::DiagramObjectPoint with other classes	319
Table 474 – Attributes of DiagramLayout::DiagramObjectStyle	320
Table 475 – Attributes of DiagramLayout::TextDiagramObject	320
Table 476 – Association ends of DiagramLayout::DiagramObject with other classes	320
Table 477 – Attributes of DiagramLayout::VisibilityLayer	321
Table 478 – Association ends of DiagramLayout::VisibilityLayer with other classes	321
Table 479 – Attributes of Core::IdentifiedObject	322
Table 480 – Attributes of DomainProfile::Simple_Float	322
Table 481 – Attributes of DomainProfile::AngleDegrees	322
Table 482 – Attributes of GeographicalLocationProfile::GeographicalLocationVersion	326
Table 483 – Attributes of Common::CoordinateSystem	327
Table 484 – Attributes of Common::Location	327
Table 485 – Association ends of Common::Location with other classes	327
Table 486 – Attributes of Common::PositionPoint	328
Table 487 – Association ends of Common::PositionPoint with other classes	328
Table 488 – Attributes of Core::IdentifiedObject	329
Table 489 – Attributes of Core::PowerSystemResource	329

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENERGY MANAGEMENT SYSTEM APPLICATION PROGRAM INTERFACE (EMS-API) –

Part 600-2: Common Grid Model Exchange Specification (CGMES) – Exchange profiles specification

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IEC TS 61970-600-2, which is a technical specification, has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
57/1816/DTS	57/1872/RVDTS

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 61970 series, published under the general title *Energy Management System Application Program Interface (EMS-API)*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

ENERGY MANAGEMENT SYSTEM APPLICATION PROGRAM INTERFACE (EMS-API) –

Part 600-2: Common Grid Model Exchange Specification (CGMES) – Exchange profiles specification

1 Scope

This part of IEC 61970, which is a technical specification on the CGMES, details the requirements of the exchange profiles belonging to the CGMES. The related technical information and documentation (i.e. RDFS, OCL, XMI and HTML) needed for the implementation of the CGMES, which is not copyrighted by either IEC or CENELEC, is available at the ENTSO-E web site (www.entsoe.eu).

The CGMES is defined using information on the Common Information Model (CIM) available in the public domain.

The CGMES is a superset of the former ENTSO-E CIM based data exchange standard (Profile 1) which was based on CIM14 (UML14v02) and has been used for certain network models exchanges since 2009. The CGMES reflects TSO requirements (as known by 2014) for accurate modelling of the ENTSO-E area for power flow, short circuit and dynamics applications whilst also allowing for the exchange of any diagram layouts including GIS data of a grid model.

Future editions of this technical specification will be released to describe following CGMES versions which reflect the additional requirements due to European network codes or guidelines.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61968-4, *Application integration at electric utilities – System interfaces for distribution management – Part 4: Interfaces for records and asset management*

IEC 61970-301, *Energy management system application program interface (EMS-API) – Part 301: Common information model (CIM) base*

IEC 61970-302, *Energy management system application program interface (EMS-API) – Part 302: CIM for dynamics¹*

IEC 61970-452, *Energy management system application program interface (EMS-API) – Part 452: CIM model exchange specification*

IEC 61970-453, *Energy management system application program interface (EMS-API) – Part 453: Diagram layout profile*

¹ Under preparation. Stage at the time of publication: IEC/AFDIS 61970-302:2017.

IEC 61970-456, *Energy management system application program interface (EMS-API) – Part 456: Solved power system state profiles*

IEC 61970-552, *Energy management system application program interface (EMS-API) – Part 552: CIMXML Model exchange format*

Withdrawn