

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Energy management system application program interface (EMS-API) –  
Part 302: Common information model (CIM) dynamics**

**Interface de programmation d'application pour système de gestion d'énergie  
(EMS-API) –  
Partie 302: Régimes dynamiques de modèle d'information commun (CIM)**



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## CONTENTS

|   |     |
|---|-----|
| FOREWORD.....   | 23  |
| INTRODUCTION.....   | 25  |
| 1 Scope.....  | 26  |
| 2 Normative references .....                                | 26  |
| 3 Terms and definitions .....                               | 27  |
| 4 Document organization .....                               | 29  |
| 5 Package dynamics.....                                     | 30  |
| 5.1 General.....  | 30  |
| 5.2 Package StandardInterconnections .....                  | 30  |
| 5.2.1 General .....   | 30  |
| 5.2.2 RemoteInputSignal .....                               | 46  |
| 5.2.3 RemoteSignalKind enumeration.....                     | 47  |
| 5.3 Package StandardModels .....                            | 47  |
| 5.3.1 General .....   | 47  |
| 5.3.2 DynamicsFunctionBlock.....                            | 48  |
| 5.3.3 RotatingMachineDynamics.....                          | 48  |
| 5.3.4 Package SynchronousMachineDynamics.....               | 49  |
| 5.3.5 Package AsynchronousMachineDynamics.....              | 80  |
| 5.3.6 Package TurbineGovernorDynamics .....                 | 88  |
| 5.3.7 Package TurbineLoadControllerDynamics.....            | 183 |
| 5.3.8 Package MechanicalLoadDynamics .....                  | 187 |
| 5.3.9 Package ExcitationSystemDynamics.....                 | 190 |
| 5.3.10 Package OverexcitationLimiterDynamics .....          | 311 |
| 5.3.11 Package UnderexcitationLimiterDynamics .....         | 319 |
| 5.3.12 Package PowerSystemStabilizerDynamics.....           | 328 |
| 5.3.13 Package DiscontinuousExcitationControlDynamics ..... | 362 |
| 5.3.14 Package PFVArControllerType1Dynamics .....           | 368 |
| 5.3.15 Package VoltageAdjusterDynamics.....                 | 372 |
| 5.3.16 Package PFVArControllerType2Dynamics .....           | 374 |
| 5.3.17 Package VoltageCompensatorDynamics.....              | 379 |
| 5.3.18 Package WindDynamics .....                           | 384 |
| 5.3.19 Package LoadDynamics.....                            | 424 |
| 5.3.20 Package HVDCDynamics.....                            | 435 |
| 5.3.21 Package StaticVarCompensatorDynamics .....           | 438 |
| 5.4 Package UserDefinedModels .....                         | 440 |
| 5.4.1 General .....   | 440 |
| 5.4.2 SynchronousMachineUserDefined .....                   | 441 |
| 5.4.3 AsynchronousMachineUserDefined.....                   | 442 |
| 5.4.4 TurbineGovernorUserDefined .....                      | 443 |
| 5.4.5 TurbineLoadControllerUserDefined.....                 | 444 |
| 5.4.6 MechanicalLoadUserDefined .....                       | 445 |
| 5.4.7 ExcitationSystemUserDefined.....                      | 446 |
| 5.4.8 OverexcitationLimiterUserDefined.....                 | 447 |
| 5.4.9 UnderexcitationLimiterUserDefined.....                | 448 |
| 5.4.10 PowerSystemStabilizerUserDefined.....                | 449 |
| 5.4.11 DiscontinuousExcitationControlUserDefined .....      | 449 |

|                       |  |     |
|-----------------------|--|-----|
| 5.4.12                | PFVArControllerType1UserDefined .....  | 450 |
| 5.4.13                | VoltageAdjusterUserDefined .....   | 451 |
| 5.4.14                | PFVArControllerType2UserDefined .....  | 452 |
| 5.4.15                | VoltageCompensatorUserDefined .....  | 453 |
| 5.4.16                | LoadUserDefined .....  | 454 |
| 5.4.17                | WindType1or2UserDefined .....  | 454 |
| 5.4.18                | WindType3or4UserDefined .....  | 455 |
| 5.4.19                | WindPlantUserDefined .....   | 456 |
| 5.4.20                | CSCUserDefined .....   | 457 |
| 5.4.21                | VSCUserDefined .....   | 457 |
| 5.4.22                | SVCUserDefined .....   | 458 |
| 5.4.23                | ProprietaryParameterDynamics root class .....  | 459 |
| 5.5                   | Package Examples .....   | 460 |
| Annex A (informative) | Dynamics package symbol representation conventions .....                                     | 464 |
| Annex B (informative) | Use of per unit .....  | 466 |
| Annex C (informative) | Updates to CIM dynamics standard models .....  | 468 |
| Bibliography          | .....  | 473 |
| Figure 1 –            | StandardInterconnectionSynchronousMachine .....  | 31  |
| Figure 2 –            | StandardInterconnectionSynchronousGeneratorCrossCompound .....                               | 32  |
| Figure 3 –            | StandardInterconnectionAsynchronousMachine .....   | 33  |
| Figure 4 –            | StandardInterconnectionWindTurbineType1Aand1B .....  | 34  |
| Figure 5 –            | StandardInterconnectionWindTurbineType2 .....  | 35  |
| Figure 6 –            | StandardInterconnectionWindTurbineType3 .....  | 36  |
| Figure 7 –            | StandardInterconnectionWindTurbineType4Aand4B .....  | 37  |
| Figure 8 –            | StandardInterconnectionSingleLoad .....  | 38  |
| Figure 9 –            | Class diagram<br>StandardInterconnections::StandardSynchronousMachineInterconnection .....   | 39  |
| Figure 10 –           | Class diagram<br>StandardInterconnections::StandardAsynchronousMachineInterconnection .....  | 40  |
| Figure 11 –           | Class diagram<br>StandardInterconnections::StandardWindType1and2Interconnection .....        | 41  |
| Figure 12 –           | Class diagram<br>StandardInterconnections::StandardWindType3and4Interconnection .....        | 43  |
| Figure 13 –           | Class diagram StandardInterconnections::StandardLoadInterconnection .....                    | 44  |
| Figure 14 –           | Class diagram StandardInterconnections::StandardHVDCInterconnection .....                    | 45  |
| Figure 15 –           | Class diagram<br>StandardInterconnections::StandardStaticVarCompensatorInterconnection ..... | 46  |
| Figure 16 –           | SynchronousGeneratorInterconnectionAndVariables .....  | 50  |
| Figure 17 –           | SynchronousMotorInterconnectionAndVariables .....  | 51  |
| Figure 18 –           | Class diagram<br>SynchronousMachineDynamics::SynchronousMachineDynamics .....                | 52  |
| Figure 19 –           | SynchronousMachineSaturationParameters .....   | 53  |
| Figure 20 –           | SynchronousGeneratorMechanicalEquation .....   | 54  |
| Figure 21 –           | SynchronousMotorMechanicalEquation .....   | 54  |
| Figure 22 –           | SynchronousGeneratorPhasor .....   | 55  |

|   |     |
|---|-----|
| Figure 23 – SynchronousMotorPhasor .....  | 56  |
| Figure 24 – Simplified .....  | 58  |
| Figure 25 – SubtransientRoundRotor .....  | 62  |
| Figure 26 – SubtransientSalientPole .....   | 63  |
| Figure 27 – SubtransientTypeF .....   | 64  |
| Figure 28 – SubtransientTypeJ .....   | 65  |
| Figure 29 – SubtransientRoundRotorSimplified .....  | 66  |
| Figure 30 – SubtransientSalientPoleSimplified .....   | 68  |
| Figure 31 – SubtransientRoundRotorSimplifiedDirectAxis .....                                | 70  |
| Figure 32 – SubtransientSalientPoleSimplifiedDirectAxis .....                               | 72  |
| Figure 33 – SynchronousEquivalentCircuit .....  | 77  |
| Figure 34 – AsynchronousGeneratorInterconnectionAndVariables .....                          | 81  |
| Figure 35 – AsynchronousMotorInterconnectionAndVariables .....                              | 81  |
| Figure 36 – Class diagram<br>AsynchronousMachineDynamics::AsynchronousMachineDynamics ..... | 82  |
| Figure 37 – AsynchronousGeneratorMechanicalEquation .....                                   | 83  |
| Figure 38 – AsynchronousMotorMechanicalEquation .....                                       | 83  |
| Figure 39 – AsynchronousEquivalentCircuit .....   | 87  |
| Figure 40 – TurbineGovernorInterconnectionAndVariables .....                                | 89  |
| Figure 41 – Class diagram TurbineGovernorDynamics::TurbineGovernorDynamics .....            | 90  |
| Figure 42 – GovHydroIEEE0 .....   | 92  |
| Figure 43 – GovHydroIEEE2 .....   | 94  |
| Figure 44 – GovSteamIEEE1 .....   | 96  |
| Figure 45 – GovCT1 .....  | 99  |
| Figure 46 – GovCT2 .....  | 103 |
| Figure 47 – GovGAST .....   | 107 |
| Figure 48 – GovGAST1 .....  | 109 |
| Figure 49 – GovGAST2 .....  | 111 |
| Figure 50 – GovGAST3 .....  | 114 |
| Figure 51 – GovGAST3ExhaustTemperature .....  | 114 |
| Figure 52 – GovGAST4 .....  | 116 |
| Figure 53 – GovGASTWD .....   | 118 |
| Figure 54 – GovHydro1 .....   | 120 |
| Figure 55 – GovHydro2 .....   | 122 |
| Figure 56 – GovHydro3 .....   | 125 |
| Figure 57 – GovHydro4 .....   | 128 |
| Figure 58 – GovHydro4SimpleHydroTurbine .....   | 129 |
| Figure 59 – GovHydro4FrancisPeltonTurbine .....   | 130 |
| Figure 60 – GovHydro4KaplanTurbine .....  | 131 |
| Figure 61 – GovHydroDD .....  | 134 |
| Figure 62 – GovHydroFrancis .....   | 137 |
| Figure 63 – GovHydroFrancisNonLinearGainAndEfficiency .....                                 | 138 |
| Figure 64 – DetailedHydroModelHydraulicSystem .....   | 139 |

|   |     |
|---|-----|
| Figure 65 – GovHydroPelton .....  | 142 |
| Figure 66 – GovHydroPeltonNonLinearGainAndEfficiency.....                                       | 143 |
| Figure 67 – GovHydroPID .....   | 146 |
| Figure 68 – GovHydroPID2 .....  | 149 |
| Figure 69 – GovHydroR .....   | 152 |
| Figure 70 – GovHydroWEH.....  | 155 |
| Figure 71 – GovHydroWPID .....  | 159 |
| Figure 72 – GovSteam0 .....   | 161 |
| Figure 73 – GovSteam1 .....   | 162 |
| Figure 74 – GovSteam1BacklashHysteresis.....  | 163 |
| Figure 75 – GovSteam1InputSpeedDeadband.....  | 164 |
| Figure 76 – GovSteam2 .....   | 166 |
| Figure 77 – GovSteamBB .....  | 168 |
| Figure 78 – GovSteamCC .....  | 169 |
| Figure 79 – GovSteamEU .....  | 171 |
| Figure 80 – GovSteamFV2.....  | 173 |
| Figure 81 – GovSteamFV3.....  | 175 |
| Figure 82 – GovSteamFV4.....  | 178 |
| Figure 83 – GovSteamSGO.....  | 181 |
| Figure 84 – Class diagram<br>TurbineLoadControllerDynamics::TurbineLoadControllerDynamics ..... | 183 |
| Figure 85 – TurbLCFB1 .....   | 185 |
| Figure 86 – MechanicalLoadInterconnectionAndVariables.....                                      | 187 |
| Figure 87 – MechanicalLoadEquations.....  | 187 |
| Figure 88 – Class diagram MechanicalLoadDynamics::MechanicalLoadDynamics .....                  | 188 |
| Figure 89 – ExcitationSystemInterconnectionAndVariables .....                                   | 190 |
| Figure 90 – Class diagram ExcitationSystemDynamics::ExcitationSystemDynamics .....              | 191 |
| Figure 91 – ExcAC1A.....  | 229 |
| Figure 92 – ExcAC2A.....  | 231 |
| Figure 93 – ExcAC3A.....  | 234 |
| Figure 94 – ExcAC4A.....  | 236 |
| Figure 95 – ExcAC5A.....  | 238 |
| Figure 96 – ExcAC6A.....  | 240 |
| Figure 97 – ExcAC8B.....  | 242 |
| Figure 98 – ExcANS .....  | 245 |
| Figure 99 – ExcAVR1.....  | 247 |
| Figure 100 – ExcAVR2.....   | 249 |
| Figure 101 – ExcAVR3.....   | 250 |
| Figure 102 – ExcAVR4.....   | 252 |
| Figure 103 – ExcAVR5.....   | 254 |
| Figure 104 – ExcAVR7.....   | 256 |
| Figure 105 – ExcBBC.....  | 259 |
| Figure 106 – ExcCZ .....  | 261 |

|  |     |
|--|-----|
| Figure 107 – ExcDC1A .....   | 263 |
| Figure 108 – ExcDC2A .....   | 265 |
| Figure 109 – ExcDC3A .....   | 267 |
| Figure 110 – ExcDC3A1.....   | 269 |
| Figure 111 – ExcELIN1 .....  | 271 |
| Figure 112 – ExcELIN2 .....  | 273 |
| Figure 113 – ExcHU .....   | 275 |
| Figure 114 – ExcNI .....   | 277 |
| Figure 115 – ExcOEX3T .....  | 280 |
| Figure 116 – ExcPIC .....  | 282 |
| Figure 117 – ExcREXS .....   | 285 |
| Figure 118 – ExcRQB .....  | 289 |
| Figure 119 – ExcSCRX .....   | 290 |
| Figure 120 – ExcSEXS .....   | 292 |
| Figure 121 – ExcSK .....   | 294 |
| Figure 122 – ExcST1A .....   | 297 |
| Figure 123 – ExcST2A .....   | 299 |
| Figure 124 – ExcST3A .....   | 301 |
| Figure 125 – ExcST4B .....   | 303 |
| Figure 126 – ExcST6B .....   | 305 |
| Figure 127 – ExcST7B .....   | 308 |
| Figure 128 – Class diagram<br>OverexcitationLimiterDynamics::OverexcitationLimiterDynamics .....   | 312 |
| Figure 129 – OverexcLim2 .....   | 314 |
| Figure 130 – OverexcLimX1 .....  | 315 |
| Figure 131 – OverexcLimX1TimeCharacteristic .....  | 316 |
| Figure 132 – OverexcLimX2 .....  | 318 |
| Figure 133 – OverexcLimX2TimeCharacteristic .....  | 318 |
| Figure 134 – Class diagram<br>UnderexcitationLimiterDynamics::UnderexcitationLimiterDynamics ..... | 320 |
| Figure 135 – UnderexcLim2Simplified .....  | 324 |
| Figure 136 – UnderexcLimX1 .....   | 326 |
| Figure 137 – UnderexcLimX2 .....   | 327 |
| Figure 138 – PowerSystemStabilizerInterconnectionAndVariables .....                                | 329 |
| Figure 139 – Class diagram<br>PowerSystemStabilizerDynamics::PowerSystemStabilizerDynamics .....   | 330 |
| Figure 140 – Pss1 .....  | 338 |
| Figure 141 – Pss1A .....   | 340 |
| Figure 142 – Pss2B .....   | 342 |
| Figure 143 – Pss2ST .....  | 344 |
| Figure 144 – Pss5 .....  | 346 |
| Figure 145 – PssELIN2 .....  | 348 |
| Figure 146 – PssPTIST1 .....   | 349 |
| Figure 147 – PssPTIST3 .....   | 351 |

|  |     |
|--|-----|
| Figure 148 – PssRQB .....  | 353 |
| Figure 149 – PssSB4 .....  | 354 |
| Figure 150 – PssSH .....   | 356 |
| Figure 151 – PssSK .....   | 357 |
| Figure 152 – PssSTAB2A .....   | 359 |
| Figure 153 – PssWECC .....   | 360 |
| Figure 154 – DiscontinuousExcitationControlInterconnectionAndVariables .....                                       | 363 |
| Figure 155 – Class diagram<br>DiscontinuousExcitationControlDynamics::DiscontinuousExcitationControlDynamics ..... | 364 |
| Figure 156 – Class diagram<br>PFVArControllerType1Dynamics::PFVArControllerType1Dynamics .....                     | 369 |
| Figure 157 – Class diagram VoltageAdjusterDynamics::VoltageAdjusterDynamics .....                                  | 372 |
| Figure 158 – Class diagram<br>PFVArControllerType2Dynamics::PFVArControllerType2Dynamics .....                     | 375 |
| Figure 159 – PFVArType2Common1 .....   | 378 |
| Figure 160 – VoltageCompensatorInterconnectionAndVariables .....   | 380 |
| Figure 161 – Class diagram<br>VoltageCompensatorDynamics::VoltageCompensatorDynamics .....                         | 381 |
| Figure 162 – Class diagram WindDynamics::WindDynamicsType1or2 .....  | 385 |
| Figure 163 – Class diagram WindDynamics::WindDynamicsType3 .....   | 386 |
| Figure 164 – Class diagram WindDynamics::WindDynamicsType4 .....   | 387 |
| Figure 165 – Class diagram WindDynamics::WindDynamicsPlant .....   | 388 |
| Figure 166 – LoadInterconnectionAndVariables .....   | 424 |
| Figure 167 – Class diagram LoadDynamics::LoadDynamics .....  | 425 |
| Figure 168 – LoadCompositeEquations .....  | 426 |
| Figure 169 – LoadGenericNonLinearTypeEquations .....   | 427 |
| Figure 170 – LoadStaticTypeEquations .....   | 430 |
| Figure 171 – LoadMotor .....   | 433 |
| Figure 172 – Class diagram HVDCDynamics::HVDCDynamics .....  | 436 |
| Figure 173 – Class diagram<br>StaticVarCompensatorDynamics::StaticVarCompensatorDynamics .....                     | 439 |
| Figure 174 – Class diagram UserDefinedModels::ProprietaryUserDefinedModels .....                                   | 441 |
| Figure 175 – Object diagram Examples::ExampleStandardModel .....   | 461 |
| Figure 176 – Object diagram Examples::ExampleFunctionBlockProprietaryModel .....                                   | 462 |
| Figure 177 – Object diagram Examples::ExampleCompleteProprietaryModel .....  | 463 |
| Table 1 – Attributes of StandardInterconnections::RemoteInputSignal .....  | 46  |
| Table 2 – Association ends of StandardInterconnections::RemoteInputSignal with other<br>classes .....              | 47  |
| Table 3 – Literals of StandardInterconnections::RemoteSignalKind .....   | 47  |
| Table 4 – Attributes of StandardModels::DynamicsFunctionBlock .....  | 48  |
| Table 5 – Association ends of StandardModels::DynamicsFunctionBlock with other<br>classes .....                    | 48  |
| Table 6 – Attributes of StandardModels::RotatingMachineDynamics .....  | 49  |
| Table 7 – Association ends of StandardModels::RotatingMachineDynamics with other<br>classes .....                  | 49  |

|   |    |
|---|----|
| Table 8 – Attributes of SynchronousMachineDynamics::SynchronousMachineDynamics .....  | 57 |
| Table 9 – Association ends of SynchronousMachineDynamics::SynchronousMachineDynamics with other classes.....                  | 57 |
| Table 10 – Attributes of SynchronousMachineDynamics::SynchronousMachineSimplified .....                                       | 59 |
| Table 11 – Association ends of SynchronousMachineDynamics::SynchronousMachineSimplified with other classes .....              | 59 |
| Table 12 – Attributes of SynchronousMachineDynamics::SynchronousMachineDetailed .....   | 60 |
| Table 13 – Association ends of SynchronousMachineDynamics::SynchronousMachineDetailed with other classes .....                | 61 |
| Table 14 – Attributes of SynchronousMachineDynamics::SynchronousMachineTimeConstantReactance .....                            | 74 |
| Table 15 – Association ends of SynchronousMachineDynamics::SynchronousMachineTimeConstantReactance with other classes .....   | 75 |
| Table 16 – Attributes of SynchronousMachineDynamics::SynchronousMachineEquivalentCircuit .....                                | 78 |
| Table 17 – Association ends of SynchronousMachineDynamics::SynchronousMachineEquivalentCircuit with other classes .....       | 79 |
| Table 18 – Literals of SynchronousMachineDynamics::IfcBaseKind .....  | 79 |
| Table 19 – Literals of SynchronousMachineDynamics::SynchronousMachineModelKind .....  | 80 |
| Table 20 – Literals of SynchronousMachineDynamics::RotorKind .....  | 80 |
| Table 21 – Attributes of AsynchronousMachineDynamics::AsynchronousMachineDynamics .....                                       | 84 |
| Table 22 – Association ends of AsynchronousMachineDynamics::AsynchronousMachineDynamics with other classes .....              | 85 |
| Table 23 – Attributes of AsynchronousMachineDynamics::AsynchronousMachineTimeConstantReactance .....                          | 86 |
| Table 24 – Association ends of AsynchronousMachineDynamics::AsynchronousMachineTimeConstantReactance with other classes ..... | 86 |
| Table 25 – Attributes of AsynchronousMachineDynamics::AsynchronousMachineEquivalentCircuit.....                               | 88 |
| Table 26 – Association ends of AsynchronousMachineDynamics::AsynchronousMachineEquivalentCircuit with other classes .....     | 88 |
| Table 27 – Attributes of TurbineGovernorDynamics::CrossCompoundTurbineGovernorDynamics.....                                   | 91 |
| Table 28 – Association ends of TurbineGovernorDynamics::CrossCompoundTurbineGovernorDynamics with other classes .....         | 91 |
| Table 29 – Attributes of TurbineGovernorDynamics::TurbineGovernorDynamics .....   | 91 |
| Table 30 – Association ends of TurbineGovernorDynamics::TurbineGovernorDynamics with other classes .....                      | 92 |
| Table 31 – Attributes of TurbineGovernorDynamics::GovHydroIEEE0 .....   | 93 |
| Table 32 – Association ends of TurbineGovernorDynamics::GovHydroIEEE0 with other classes .....                                | 93 |
| Table 33 – Attributes of TurbineGovernorDynamics::GovHydroIEEE2 .....   | 95 |

|  |     |
|--|-----|
| Table 34 – Association ends of TurbineGovernorDynamics::GovHydroIEEE2 with other classes .....   | 96  |
| Table 35 – Attributes of TurbineGovernorDynamics::GovSteamIEEE1 .....                            | 97  |
| Table 36 – Association ends of TurbineGovernorDynamics::GovSteamIEEE1 with other classes .....   | 98  |
| Table 37 – Attributes of TurbineGovernorDynamics::GovCT1 .....                                   | 101 |
| Table 38 – Association ends of TurbineGovernorDynamics::GovCT1 with other classes .....          | 103 |
| Table 39 – Attributes of TurbineGovernorDynamics::GovCT2 .....                                   | 104 |
| Table 40 – Association ends of TurbineGovernorDynamics::GovCT2 with other classes .....          | 107 |
| Table 41 – Attributes of TurbineGovernorDynamics::GovGAST .....                                  | 108 |
| Table 42 – Association ends of TurbineGovernorDynamics::GovGAST with other classes .....         | 108 |
| Table 43 – Attributes of TurbineGovernorDynamics::GovGAST1 .....                                 | 110 |
| Table 44 – Association ends of TurbineGovernorDynamics::GovGAST1 with other classes .....        | 111 |
| Table 45 – Attributes of TurbineGovernorDynamics::GovGAST2 .....                                 | 112 |
| Table 46 – Association ends of TurbineGovernorDynamics::GovGAST2 with other classes .....        | 113 |
| Table 47 – Attributes of TurbineGovernorDynamics::GovGAST3 .....                                 | 115 |
| Table 48 – Association ends of TurbineGovernorDynamics::GovGAST3 with other classes .....        | 115 |
| Table 49 – Attributes of TurbineGovernorDynamics::GovGAST4 .....                                 | 117 |
| Table 50 – Association ends of TurbineGovernorDynamics::GovGAST4 with other classes .....        | 117 |
| Table 51 – Attributes of TurbineGovernorDynamics::GovGASTWD .....                                | 119 |
| Table 52 – Association ends of TurbineGovernorDynamics::GovGASTWD with other classes .....       | 120 |
| Table 53 – Attributes of TurbineGovernorDynamics::GovHydro1 .....                                | 121 |
| Table 54 – Association ends of TurbineGovernorDynamics::GovHydro1 with other classes .....       | 121 |
| Table 55 – Attributes of TurbineGovernorDynamics::GovHydro2 .....                                | 123 |
| Table 56 – Association ends of TurbineGovernorDynamics::GovHydro2 with other classes .....       | 124 |
| Table 57 – Attributes of TurbineGovernorDynamics::GovHydro3 .....                                | 126 |
| Table 58 – Association ends of TurbineGovernorDynamics::GovHydro3 with other classes .....       | 127 |
| Table 59 – Attributes of TurbineGovernorDynamics::GovHydro4 .....                                | 132 |
| Table 60 – Association ends of TurbineGovernorDynamics::GovHydro4 with other classes .....       | 133 |
| Table 61 – Attributes of TurbineGovernorDynamics::GovHydroDD .....                               | 135 |
| Table 62 – Association ends of TurbineGovernorDynamics::GovHydroDD with other classes .....      | 136 |
| Table 63 – Attributes of TurbineGovernorDynamics::GovHydroFrancis .....                          | 140 |
| Table 64 – Association ends of TurbineGovernorDynamics::GovHydroFrancis with other classes ..... | 141 |
| Table 65 – Attributes of TurbineGovernorDynamics::GovHydroPelton .....                           | 144 |
| Table 66 – Association ends of TurbineGovernorDynamics::GovHydroPelton with other classes .....  | 145 |

|   |     |
|---|-----|
| Table 67 – Attributes of TurbineGovernorDynamics::GovHydroPID .....                           | 147 |
| Table 68 – Association ends of TurbineGovernorDynamics::GovHydroPID with other classes .....  | 148 |
| Table 69 – Attributes of TurbineGovernorDynamics::GovHydroPID2 .....                          | 150 |
| Table 70 – Association ends of TurbineGovernorDynamics::GovHydroPID2 with other classes ..... | 151 |
| Table 71 – Attributes of TurbineGovernorDynamics::GovHydroR .....                             | 153 |
| Table 72 – Association ends of TurbineGovernorDynamics::GovHydroR with other classes .....    | 154 |
| Table 73 – Attributes of TurbineGovernorDynamics::GovHydroWEH .....                           | 156 |
| Table 74 – Association ends of TurbineGovernorDynamics::GovHydroWEH with other classes .....  | 158 |
| Table 75 – Attributes of TurbineGovernorDynamics::GovHydroWPID .....                          | 160 |
| Table 76 – Association ends of TurbineGovernorDynamics::GovHydroWPID with other classes ..... | 160 |
| Table 77 – Attributes of TurbineGovernorDynamics::GovSteam0 .....                             | 161 |
| Table 78 – Association ends of TurbineGovernorDynamics::GovSteam0 with other classes .....    | 162 |
| Table 79 – Attributes of TurbineGovernorDynamics::GovSteam1 .....                             | 165 |
| Table 80 – Association ends of TurbineGovernorDynamics::GovSteam1 with other classes .....    | 166 |
| Table 81 – Attributes of TurbineGovernorDynamics::GovSteam2 .....                             | 167 |
| Table 82 – Association ends of TurbineGovernorDynamics::GovSteam2 with other classes .....    | 167 |
| Table 83 – Attributes of TurbineGovernorDynamics::GovSteamBB .....                            | 168 |
| Table 84 – Association ends of TurbineGovernorDynamics::GovSteamBB with other classes .....   | 169 |
| Table 85 – Attributes of TurbineGovernorDynamics::GovSteamCC .....                            | 170 |
| Table 86 – Association ends of TurbineGovernorDynamics::GovSteamCC with other classes .....   | 171 |
| Table 87 – Attributes of TurbineGovernorDynamics::GovSteamEU .....                            | 172 |
| Table 88 – Association ends of TurbineGovernorDynamics::GovSteamEU with other classes .....   | 173 |
| Table 89 – Attributes of TurbineGovernorDynamics::GovSteamFV2 .....                           | 174 |
| Table 90 – Association ends of TurbineGovernorDynamics::GovSteamFV2 with other classes .....  | 174 |
| Table 91 – Attributes of TurbineGovernorDynamics::GovSteamFV3 .....                           | 176 |
| Table 92 – Association ends of TurbineGovernorDynamics::GovSteamFV3 with other classes .....  | 177 |
| Table 93 – Attributes of TurbineGovernorDynamics::GovSteamFV4 .....                           | 179 |
| Table 94 – Association ends of TurbineGovernorDynamics::GovSteamFV4 with other classes .....  | 180 |
| Table 95 – Attributes of TurbineGovernorDynamics::GovSteamSGO .....                           | 181 |
| Table 96 – Association ends of TurbineGovernorDynamics::GovSteamSGO with other classes .....  | 182 |
| Table 97 – Literals of TurbineGovernorDynamics::DroopSignalFeedbackKind .....                 | 182 |
| Table 98 – Literals of TurbineGovernorDynamics::FrancisGovernorControlKind .....              | 182 |
| Table 99 – Literals of TurbineGovernorDynamics::GovHydro4ModelKind .....                      | 183 |

|   |     |
|---|-----|
| Table 100 – Attributes of TurbineLoadControllerDynamics::TurbineLoadControllerDynamics .....                          | 184 |
| Table 101 – Association ends of TurbineLoadControllerDynamics::TurbineLoadControllerDynamics with other classes ..... | 184 |
| Table 102 – Attributes of TurbineLoadControllerDynamics::TurbLCFB1 .....  | 186 |
| Table 103 – Association ends of TurbineLoadControllerDynamics::TurbLCFB1 with other classes .....                     | 186 |
| Table 104 – Attributes of MechanicalLoadDynamics::MechanicalLoadDynamics .....  | 188 |
| Table 105 – Association ends of MechanicalLoadDynamics::MechanicalLoadDynamics with other classes .....               | 189 |
| Table 106 – Attributes of MechanicalLoadDynamics::MechLoad1 .....   | 189 |
| Table 107 – Association ends of MechanicalLoadDynamics::MechLoad1 with other classes .....                            | 189 |
| Table 108 – Attributes of ExcitationSystemDynamics::ExcitationSystemDynamics .....                                    | 192 |
| Table 109 – Association ends of ExcitationSystemDynamics::ExcitationSystemDynamics with other classes .....           | 192 |
| Table 110 – Attributes of ExcitationSystemDynamics::ExcIEEEAC1A .....   | 193 |
| Table 111 – Association ends of ExcitationSystemDynamics::ExcIEEEAC1A with other classes .....                        | 194 |
| Table 112 – Attributes of ExcitationSystemDynamics::ExcIEEEAC2A .....   | 195 |
| Table 113 – Association ends of ExcitationSystemDynamics::ExcIEEEAC2A with other classes .....                        | 196 |
| Table 114 – Attributes of ExcitationSystemDynamics::ExcIEEEAC3A .....   | 197 |
| Table 115 – Association ends of ExcitationSystemDynamics::ExcIEEEAC3A with other classes .....                        | 198 |
| Table 116 – Attributes of ExcitationSystemDynamics::ExcIEEEAC4A .....   | 199 |
| Table 117 – Association ends of ExcitationSystemDynamics::ExcIEEEAC4A with other classes .....                        | 199 |
| Table 118 – Attributes of ExcitationSystemDynamics::ExcIEEEAC5A .....   | 200 |
| Table 119 – Association ends of ExcitationSystemDynamics::ExcIEEEAC5A with other classes .....                        | 201 |
| Table 120 – Attributes of ExcitationSystemDynamics::ExcIEEEAC6A .....   | 202 |
| Table 121 – Association ends of ExcitationSystemDynamics::ExcIEEEAC6A with other classes .....                        | 203 |
| Table 122 – Attributes of ExcitationSystemDynamics::ExcIEEEAC7B .....   | 204 |
| Table 123 – Association ends of ExcitationSystemDynamics::ExcIEEEAC7B with other classes .....                        | 205 |
| Table 124 – Attributes of ExcitationSystemDynamics::ExcIEEEAC8B .....   | 206 |
| Table 125 – Association ends of ExcitationSystemDynamics::ExcIEEEAC8B with other classes .....                        | 207 |
| Table 126 – Attributes of ExcitationSystemDynamics::ExcIEEEDC1A .....   | 208 |
| Table 127 – Association ends of ExcitationSystemDynamics::ExcIEEEDC1A with other classes .....                        | 209 |
| Table 128 – Attributes of ExcitationSystemDynamics::ExcIEEEDC2A .....   | 210 |
| Table 129 – Association ends of ExcitationSystemDynamics::ExcIEEEDC2A with other classes .....                        | 211 |
| Table 130 – Attributes of ExcitationSystemDynamics::ExcIEEEDC3A .....   | 212 |

|  |     |
|--|-----|
| Table 131 – Association ends of ExcitationSystemDynamics::ExcIEEEDC3A with other classes ..... | 213 |
| Table 132 – Attributes of ExcitationSystemDynamics::ExcIEEEDC4B .....                          | 214 |
| Table 133 – Association ends of ExcitationSystemDynamics::ExcIEEEDC4B with other classes ..... | 215 |
| Table 134 – Attributes of ExcitationSystemDynamics::ExcIEEEST1A .....                          | 216 |
| Table 135 – Association ends of ExcitationSystemDynamics::ExcIEEEST1A with other classes ..... | 217 |
| Table 136 – Attributes of ExcitationSystemDynamics::ExcIEEEST2A .....                          | 218 |
| Table 137 – Association ends of ExcitationSystemDynamics::ExcIEEEST2A with other classes ..... | 219 |
| Table 138 – Attributes of ExcitationSystemDynamics::ExcIEEEST3A .....                          | 220 |
| Table 139 – Association ends of ExcitationSystemDynamics::ExcIEEEST3A with other classes ..... | 221 |
| Table 140 – Attributes of ExcitationSystemDynamics::ExcIEEEST4B .....                          | 222 |
| Table 141 – Association ends of ExcitationSystemDynamics::ExcIEEEST4B with other classes ..... | 223 |
| Table 142 – Attributes of ExcitationSystemDynamics::ExcIEEEST5B .....                          | 224 |
| Table 143 – Association ends of ExcitationSystemDynamics::ExcIEEEST5B with other classes ..... | 225 |
| Table 144 – Attributes of ExcitationSystemDynamics::ExcIEEEST6B .....                          | 226 |
| Table 145 – Association ends of ExcitationSystemDynamics::ExcIEEEST6B with other classes ..... | 227 |
| Table 146 – Attributes of ExcitationSystemDynamics::ExcIEEEST7B .....                          | 228 |
| Table 147 – Association ends of ExcitationSystemDynamics::ExcIEEEST7B with other classes ..... | 229 |
| Table 148 – Attributes of ExcitationSystemDynamics::ExcAC1A .....                              | 230 |
| Table 149 – Association ends of ExcitationSystemDynamics::ExcAC1A with other classes .....     | 231 |
| Table 150 – Attributes of ExcitationSystemDynamics::ExcAC2A .....                              | 232 |
| Table 151 – Association ends of ExcitationSystemDynamics::ExcAC2A with other classes .....     | 233 |
| Table 152 – Attributes of ExcitationSystemDynamics::ExcAC3A .....                              | 235 |
| Table 153 – Association ends of ExcitationSystemDynamics::ExcAC3A with other classes .....     | 236 |
| Table 154 – Attributes of ExcitationSystemDynamics::ExcAC4A .....                              | 237 |
| Table 155 – Association ends of ExcitationSystemDynamics::ExcAC4A with other classes .....     | 237 |
| Table 156 – Attributes of ExcitationSystemDynamics::ExcAC5A .....                              | 239 |
| Table 157 – Association ends of ExcitationSystemDynamics::ExcAC5A with other classes .....     | 240 |
| Table 158 – Attributes of ExcitationSystemDynamics::ExcAC6A .....                              | 241 |
| Table 159 – Association ends of ExcitationSystemDynamics::ExcAC6A with other classes .....     | 242 |
| Table 160 – Attributes of ExcitationSystemDynamics::ExcAC8B .....                              | 243 |
| Table 161 – Association ends of ExcitationSystemDynamics::ExcAC8B with other classes .....     | 244 |
| Table 162 – Attributes of ExcitationSystemDynamics::ExcANS .....                               | 246 |

|   |     |
|---|-----|
| Table 163 – Association ends of ExcitationSystemDynamics::ExcANS with other classes .....   | 247 |
| Table 164 – Attributes of ExcitationSystemDynamics::ExcAVR1 .....                           | 248 |
| Table 165 – Association ends of ExcitationSystemDynamics::ExcAVR1 with other classes .....  | 248 |
| Table 166 – Attributes of ExcitationSystemDynamics::ExcAVR2 .....                           | 249 |
| Table 167 – Association ends of ExcitationSystemDynamics::ExcAVR2 with other classes .....  | 250 |
| Table 168 – Attributes of ExcitationSystemDynamics::ExcAVR3 .....                           | 251 |
| Table 169 – Association ends of ExcitationSystemDynamics::ExcAVR3 with other classes .....  | 251 |
| Table 170 – Attributes of ExcitationSystemDynamics::ExcAVR4 .....                           | 253 |
| Table 171 – Association ends of ExcitationSystemDynamics::ExcAVR4 with other classes .....  | 254 |
| Table 172 – Attributes of ExcitationSystemDynamics::ExcAVR5 .....                           | 255 |
| Table 173 – Association ends of ExcitationSystemDynamics::ExcAVR5 with other classes .....  | 255 |
| Table 174 – Attributes of ExcitationSystemDynamics::ExcAVR7 .....                           | 257 |
| Table 175 – Association ends of ExcitationSystemDynamics::ExcAVR7 with other classes .....  | 258 |
| Table 176 – Attributes of ExcitationSystemDynamics::ExcBBC .....                            | 260 |
| Table 177 – Association ends of ExcitationSystemDynamics::ExcBBC with other classes .....   | 261 |
| Table 178 – Attributes of ExcitationSystemDynamics::ExcCZ .....                             | 262 |
| Table 179 – Association ends of ExcitationSystemDynamics::ExcCZ with other classes .....    | 262 |
| Table 180 – Attributes of ExcitationSystemDynamics::ExcDC1A .....                           | 264 |
| Table 181 – Association ends of ExcitationSystemDynamics::ExcDC1A with other classes .....  | 265 |
| Table 182 – Attributes of ExcitationSystemDynamics::ExcDC2A .....                           | 266 |
| Table 183 – Association ends of ExcitationSystemDynamics::ExcDC2A with other classes .....  | 267 |
| Table 184 – Attributes of ExcitationSystemDynamics::ExcDC3A .....                           | 268 |
| Table 185 – Association ends of ExcitationSystemDynamics::ExcDC3A with other classes .....  | 269 |
| Table 186 – Attributes of ExcitationSystemDynamics::ExcDC3A1 .....                          | 270 |
| Table 187 – Association ends of ExcitationSystemDynamics::ExcDC3A1 with other classes ..... | 271 |
| Table 188 – Attributes of ExcitationSystemDynamics::ExcELIN1 .....                          | 272 |
| Table 189 – Association ends of ExcitationSystemDynamics::ExcELIN1 with other classes ..... | 273 |
| Table 190 – Attributes of ExcitationSystemDynamics::ExcELIN2 .....                          | 274 |
| Table 191 – Association ends of ExcitationSystemDynamics::ExcELIN2 with other classes ..... | 275 |
| Table 192 – Attributes of ExcitationSystemDynamics::ExcHU .....                             | 276 |
| Table 193 – Association ends of ExcitationSystemDynamics::ExcHU with other classes .....    | 276 |
| Table 194 – Attributes of ExcitationSystemDynamics::ExcNI .....                             | 278 |
| Table 195 – Association ends of ExcitationSystemDynamics::ExcNI with other classes .....    | 279 |

|   |     |
|---|-----|
| Table 196 – Attributes of ExcitationSystemDynamics::ExcOEX3T .....  | 281 |
| Table 197 – Association ends of ExcitationSystemDynamics::ExcOEX3T with other classes .....                           | 282 |
| Table 198 – Attributes of ExcitationSystemDynamics::ExcPIC .....  | 283 |
| Table 199 – Association ends of ExcitationSystemDynamics::ExcPIC with other classes .....                             | 284 |
| Table 200 – Attributes of ExcitationSystemDynamics::ExcREXS .....   | 287 |
| Table 201 – Association ends of ExcitationSystemDynamics::ExcREXS with other classes .....                            | 288 |
| Table 202 – Attributes of ExcitationSystemDynamics::ExcRQB .....  | 289 |
| Table 203 – Association ends of ExcitationSystemDynamics::ExcRQB with other classes .....                             | 290 |
| Table 204 – Attributes of ExcitationSystemDynamics::ExcSCRX .....   | 291 |
| Table 205 – Association ends of ExcitationSystemDynamics::ExcSCRX with other classes .....                            | 291 |
| Table 206 – Attributes of ExcitationSystemDynamics::ExcSEXS .....   | 292 |
| Table 207 – Association ends of ExcitationSystemDynamics::ExcSEXS with other classes .....                            | 293 |
| Table 208 – Attributes of ExcitationSystemDynamics::ExcSK .....   | 295 |
| Table 209 – Association ends of ExcitationSystemDynamics::ExcSK with other classes .....                              | 296 |
| Table 210 – Attributes of ExcitationSystemDynamics::ExcST1A .....   | 298 |
| Table 211 – Association ends of ExcitationSystemDynamics::ExcST1A with other classes .....                            | 299 |
| Table 212 – Attributes of ExcitationSystemDynamics::ExcST2A .....   | 300 |
| Table 213 – Association ends of ExcitationSystemDynamics::ExcST2A with other classes .....                            | 301 |
| Table 214 – Attributes of ExcitationSystemDynamics::ExcST3A .....   | 302 |
| Table 215 – Association ends of ExcitationSystemDynamics::ExcST3A with other classes .....                            | 303 |
| Table 216 – Attributes of ExcitationSystemDynamics::ExcST4B .....   | 304 |
| Table 217 – Association ends of ExcitationSystemDynamics::ExcST4B with other classes .....                            | 305 |
| Table 218 – Attributes of ExcitationSystemDynamics::ExcST6B .....   | 306 |
| Table 219 – Association ends of ExcitationSystemDynamics::ExcST6B with other classes .....                            | 307 |
| Table 220 – Attributes of ExcitationSystemDynamics::ExcST7B .....   | 309 |
| Table 221 – Association ends of ExcitationSystemDynamics::ExcST7B with other classes .....                            | 310 |
| Table 222 – Literals of ExcitationSystemDynamics::ExcIEEEEST1AUELselectorKind .....                                   | 310 |
| Table 223 – Literals of ExcitationSystemDynamics::ExcREXSFeedbackSignalKind .....                                     | 310 |
| Table 224 – Literals of ExcitationSystemDynamics::ExcST6BOELselectorKind .....  | 311 |
| Table 225 – Literals of ExcitationSystemDynamics::ExcST7BOELselectorKind .....  | 311 |
| Table 226 – Literals of ExcitationSystemDynamics::ExcST7BUELselectorKind .....  | 311 |
| Table 227 – Attributes of OverexcitationLimiterDynamics::OverexcitationLimiterDynamics .....                          | 312 |
| Table 228 – Association ends of OverexcitationLimiterDynamics::OverexcitationLimiterDynamics with other classes ..... | 313 |

|   |     |
|---|-----|
| Table 229 – Attributes of OverexcitationLimiterDynamics::OverexcLimIEEE   | 313 |
| Table 230 – Association ends of OverexcitationLimiterDynamics::OverexcLimIEEE with other classes                  | 313 |
| Table 231 – Attributes of OverexcitationLimiterDynamics::OverexcLim2  | 314 |
| Table 232 – Association ends of OverexcitationLimiterDynamics::OverexcLim2 with other classes                     | 315 |
| Table 233 – Attributes of OverexcitationLimiterDynamics::OverexcLimX1   | 317 |
| Table 234 – Association ends of OverexcitationLimiterDynamics::OverexcLimX1 with other classes                    | 317 |
| Table 235 – Attributes of OverexcitationLimiterDynamics::OverexcLimX2   | 319 |
| Table 236 – Association ends of OverexcitationLimiterDynamics::OverexcLimX2 with other classes                    | 319 |
| Table 237 – Attributes of UnderexcitationLimiterDynamics::UnderexcitationLimiterDynamics                          | 320 |
| Table 238 – Association ends of UnderexcitationLimiterDynamics::UnderexcitationLimiterDynamics with other classes | 321 |
| Table 239 – Attributes of UnderexcitationLimiterDynamics::UnderexcLimIEEE1  | 321 |
| Table 240 – Association ends of UnderexcitationLimiterDynamics::UnderexcLimIEEE1 with other classes               | 322 |
| Table 241 – Attributes of UnderexcitationLimiterDynamics::UnderexcLimIEEE2  | 322 |
| Table 242 – Association ends of UnderexcitationLimiterDynamics::UnderexcLimIEEE2 with other classes               | 323 |
| Table 243 – Attributes of UnderexcitationLimiterDynamics::UnderexcLim2Simplified                                  | 325 |
| Table 244 – Association ends of UnderexcitationLimiterDynamics::UnderexcLim2Simplified with other classes         | 325 |
| Table 245 – Attributes of UnderexcitationLimiterDynamics::UnderexcLimX1   | 326 |
| Table 246 – Association ends of UnderexcitationLimiterDynamics::UnderexcLimX1 with other classes                  | 327 |
| Table 247 – Attributes of UnderexcitationLimiterDynamics::UnderexcLimX2   | 328 |
| Table 248 – Association ends of UnderexcitationLimiterDynamics::UnderexcLimX2 with other classes                  | 328 |
| Table 249 – Attributes of PowerSystemStabilizerDynamics::PowerSystemStabilizerDynamics                            | 331 |
| Table 250 – Association ends of PowerSystemStabilizerDynamics::PowerSystemStabilizerDynamics with other classes   | 331 |
| Table 251 – Attributes of PowerSystemStabilizerDynamics::PssIEEE1A  | 332 |
| Table 252 – Association ends of PowerSystemStabilizerDynamics::PssIEEE1A with other classes                       | 332 |
| Table 253 – Attributes of PowerSystemStabilizerDynamics::PssIEEE2B  | 333 |
| Table 254 – Association ends of PowerSystemStabilizerDynamics::PssIEEE2B with other classes                       | 334 |
| Table 255 – Attributes of PowerSystemStabilizerDynamics::PssIEEE3B  | 335 |
| Table 256 – Association ends of PowerSystemStabilizerDynamics::PssIEEE3B with other classes                       | 335 |
| Table 257 – Attributes of PowerSystemStabilizerDynamics::PssIEEE4B  | 336 |
| Table 258 – Association ends of PowerSystemStabilizerDynamics::PssIEEE4B with other classes                       | 338 |
| Table 259 – Attributes of PowerSystemStabilizerDynamics::Pss1   | 339 |

|   |     |
|---|-----|
| Table 260 – Association ends of PowerSystemStabilizerDynamics::Pss1 with other classes .....  | 339 |
| Table 261 – Attributes of PowerSystemStabilizerDynamics::Pss1A .....  | 341 |
| Table 262 – Association ends of PowerSystemStabilizerDynamics::Pss1A with other classes .....   | 342 |
| Table 263 – Attributes of PowerSystemStabilizerDynamics::Pss2B .....  | 343 |
| Table 264 – Association ends of PowerSystemStabilizerDynamics::Pss2B with other classes .....   | 344 |
| Table 265 – Attributes of PowerSystemStabilizerDynamics::Pss2ST .....   | 345 |
| Table 266 – Association ends of PowerSystemStabilizerDynamics::Pss2ST with other classes .....  | 345 |
| Table 267 – Attributes of PowerSystemStabilizerDynamics::Pss5 .....   | 347 |
| Table 268 – Association ends of PowerSystemStabilizerDynamics::Pss5 with other classes .....  | 348 |
| Table 269 – Attributes of PowerSystemStabilizerDynamics::PssELIN2 .....   | 349 |
| Table 270 – Association ends of PowerSystemStabilizerDynamics::PssELIN2 with other classes .....  | 349 |
| Table 271 – Attributes of PowerSystemStabilizerDynamics::PssPTIST1 .....  | 350 |
| Table 272 – Association ends of PowerSystemStabilizerDynamics::PssPTIST1 with other classes .....   | 350 |
| Table 273 – Attributes of PowerSystemStabilizerDynamics::PssPTIST3 .....  | 352 |
| Table 274 – Association ends of PowerSystemStabilizerDynamics::PssPTIST3 with other classes .....   | 353 |
| Table 275 – Attributes of PowerSystemStabilizerDynamics::PssRQB .....   | 354 |
| Table 276 – Association ends of PowerSystemStabilizerDynamics::PssRQB with other classes .....  | 354 |
| Table 277 – Attributes of PowerSystemStabilizerDynamics::PssSB4 .....   | 355 |
| Table 278 – Association ends of PowerSystemStabilizerDynamics::PssSB4 with other classes .....  | 355 |
| Table 279 – Attributes of PowerSystemStabilizerDynamics::PssSH .....  | 356 |
| Table 280 – Association ends of PowerSystemStabilizerDynamics::PssSH with other classes .....   | 357 |
| Table 281 – Attributes of PowerSystemStabilizerDynamics::PssSK .....  | 358 |
| Table 282 – Association ends of PowerSystemStabilizerDynamics::PssSK with other classes .....   | 358 |
| Table 283 – Attributes of PowerSystemStabilizerDynamics::PssSTAB2A .....  | 359 |
| Table 284 – Association ends of PowerSystemStabilizerDynamics::PssSTAB2A with other classes .....   | 359 |
| Table 285 – Attributes of PowerSystemStabilizerDynamics::PssWECC .....  | 361 |
| Table 286 – Association ends of PowerSystemStabilizerDynamics::PssWECC with other classes .....   | 362 |
| Table 287 – Literals of PowerSystemStabilizerDynamics::InputSignalKind .....  | 362 |
| Table 288 – Attributes of<br>DiscontinuousExcitationControlDynamics::DiscontinuousExcitationControlDynamics .....                             | 364 |
| Table 289 – Association ends of<br>DiscontinuousExcitationControlDynamics::DiscontinuousExcitationControlDynamics<br>with other classes ..... | 365 |
| Table 290 – Attributes of<br>DiscontinuousExcitationControlDynamics::DiscExcContIEEEDEC1A .....   | 366 |

|  |     |
|--|-----|
| Table 291 – Association ends of<br>DiscontinuousExcitationControlDynamics::DiscExcContIEEEDEC1A with other classes ..... | 366 |
| Table 292 – Attributes of<br>DiscontinuousExcitationControlDynamics::DiscExcContIEEEDEC2A.....                           | 367 |
| Table 293 – Association ends of<br>DiscontinuousExcitationControlDynamics::DiscExcContIEEEDEC2A with other classes ..... | 367 |
| Table 294 – Attributes of<br>DiscontinuousExcitationControlDynamics::DiscExcContIEEEDEC3A.....                           | 368 |
| Table 295 – Association ends of<br>DiscontinuousExcitationControlDynamics::DiscExcContIEEEDEC3A with other classes ..... | 368 |
| Table 296 – Attributes of<br>PFVArControllerType1Dynamics::PFVArControllerType1Dynamics .....                            | 369 |
| Table 297 – Association ends of<br>PFVArControllerType1Dynamics::PFVArControllerType1Dynamics with other classes .....   | 370 |
| Table 298 – Attributes of<br>PFVArControllerType1Dynamics::PFVArType1IEEEPFController.....                               | 370 |
| Table 299 – Association ends of<br>PFVArControllerType1Dynamics::PFVArType1IEEEPFController with other classes .....     | 371 |
| Table 300 – Attributes of<br>PFVArControllerType1Dynamics::PFVArType1IEEEVArController.....                              | 371 |
| Table 301 – Association ends of<br>PFVArControllerType1Dynamics::PFVArType1IEEEVArController with other classes .....    | 372 |
| Table 302 – Attributes of VoltageAdjusterDynamics::VoltageAdjusterDynamics .....   | 373 |
| Table 303 – Association ends of VoltageAdjusterDynamics::VoltageAdjusterDynamics<br>with other classes .....             | 373 |
| Table 304 – Attributes of VoltageAdjusterDynamics::VAdjIEEE .....  | 374 |
| Table 305 – Association ends of VoltageAdjusterDynamics::VAdjIEEE with other<br>classes .....                            | 374 |
| Table 306 – Attributes of<br>PFVArControllerType2Dynamics::PFVArControllerType2Dynamics .....                            | 375 |
| Table 307 – Association ends of<br>PFVArControllerType2Dynamics::PFVArControllerType2Dynamics with other classes .....   | 376 |
| Table 308 – Attributes of<br>PFVArControllerType2Dynamics::PFVArType2IEEEPFController .....                              | 376 |
| Table 309 – Association ends of<br>PFVArControllerType2Dynamics::PFVArType2IEEEPFController with other classes .....     | 377 |
| Table 310 – Attributes of<br>PFVArControllerType2Dynamics::PFVArType2IEEEVArController.....                              | 377 |
| Table 311 – Association ends of<br>PFVArControllerType2Dynamics::PFVArType2IEEEVArController with other classes .....    | 378 |
| Table 312 – Attributes of PFVArControllerType2Dynamics::PFVArType2Common1 .....  | 379 |
| Table 313 – Association ends of<br>PFVArControllerType2Dynamics::PFVArType2Common1 with other classes .....              | 379 |
| Table 314 – Attributes of<br>VoltageCompensatorDynamics::VoltageCompensatorDynamics .....                                | 381 |
| Table 315 – Association ends of<br>VoltageCompensatorDynamics::VoltageCompensatorDynamics with other classes .....       | 382 |
| Table 316 – Attributes of VoltageCompensatorDynamics::VCompIEEEType1 .....   | 382 |
| Table 317 – Association ends of VoltageCompensatorDynamics::VCompIEEEType1<br>with other classes .....                   | 383 |

|   |     |
|---|-----|
| Table 318 – Attributes of VoltageCompensatorDynamics::VCompIEEEType2 .....                                  | 383 |
| Table 319 – Association ends of VoltageCompensatorDynamics::VCompIEEEType2 with other classes .....         | 383 |
| Table 320 – Attributes of VoltageCompensatorDynamics::GenCompensationForGenJ .....                          | 384 |
| Table 321 – Association ends of VoltageCompensatorDynamics::GenCompensationForGenJ with other classes ..... | 384 |
| Table 322 – Attributes of WindDynamics::WindPlantIEC .....  | 389 |
| Table 323 – Association ends of WindDynamics::WindPlantIEC with other classes .....                         | 389 |
| Table 324 – Attributes of WindDynamics::WindPlantDynamics .....   | 390 |
| Table 325 – Association ends of WindDynamics::WindPlantDynamics with other classes .....                    | 390 |
| Table 326 – Attributes of WindDynamics::WindTurbineType1or2Dynamics .....                                   | 390 |
| Table 327 – Association ends of WindDynamics::WindTurbineType1or2Dynamics with other classes .....          | 391 |
| Table 328 – Attributes of WindDynamics::WindTurbineType3or4Dynamics .....                                   | 391 |
| Table 329 – Association ends of WindDynamics::WindTurbineType3or4Dynamics with other classes .....          | 391 |
| Table 330 – Attributes of WindDynamics::WindTurbineType1or2IEC .....  | 392 |
| Table 331 – Association ends of WindDynamics::WindTurbineType1or2IEC with other classes .....               | 392 |
| Table 332 – Attributes of WindDynamics::WindTurbineType3or4IEC .....  | 392 |
| Table 333 – Association ends of WindDynamics::WindTurbineType3or4IEC with other classes .....               | 393 |
| Table 334 – Attributes of WindDynamics::WindTurbineType3IEC .....   | 393 |
| Table 335 – Association ends of WindDynamics::WindTurbineType3IEC with other classes .....                  | 394 |
| Table 336 – Attributes of WindDynamics::WindTurbineType4IEC .....   | 394 |
| Table 337 – Association ends of WindDynamics::WindTurbineType4IEC with other classes .....                  | 395 |
| Table 338 – Attributes of WindDynamics::WindGenTurbineType1aIEC .....                                       | 395 |
| Table 339 – Association ends of WindDynamics::WindGenTurbineType1aIEC with other classes .....              | 396 |
| Table 340 – Attributes of WindDynamics::WindGenTurbineType1bIEC .....                                       | 396 |
| Table 341 – Association ends of WindDynamics::WindGenTurbineType1bIEC with other classes .....              | 396 |
| Table 342 – Attributes of WindDynamics::WindGenTurbineType2IEC .....  | 397 |
| Table 343 – Association ends of WindDynamics::WindGenTurbineType2IEC with other classes .....               | 397 |
| Table 344 – Attributes of WindDynamics::WindGenType3IEC .....   | 398 |
| Table 345 – Association ends of WindDynamics::WindGenType3IEC with other classes .....                      | 398 |
| Table 346 – Attributes of WindDynamics::WindTurbineType4aIEC .....  | 398 |
| Table 347 – Association ends of WindDynamics::WindTurbineType4aIEC with other classes .....                 | 399 |
| Table 348 – Attributes of WindDynamics::WindTurbineType4bIEC .....  | 399 |
| Table 349 – Association ends of WindDynamics::WindTurbineType4bIEC with other classes .....                 | 400 |
| Table 350 – Attributes of WindDynamics::WindGenType3aIEC .....  | 400 |

|  |     |
|--|-----|
| Table 351 – Association ends of WindDynamics::WindGenType3aIEC with other classes .....      | 401 |
| Table 352 – Attributes of WindDynamics::WindGenType3bIEC .....                               | 401 |
| Table 353 – Association ends of WindDynamics::WindGenType3bIEC with other classes .....      | 401 |
| Table 354 – Attributes of WindDynamics::WindGenType4IEC .....                                | 402 |
| Table 355 – Association ends of WindDynamics::WindGenType4IEC with other classes .....       | 402 |
| Table 356 – Attributes of WindDynamics::WindRefFrameRotIEC .....                             | 403 |
| Table 357 – Association ends of WindDynamics::WindRefFrameRotIEC with other classes .....    | 403 |
| Table 358 – Attributes of WindDynamics::WindAeroConstIEC .....                               | 403 |
| Table 359 – Association ends of WindDynamics::WindAeroConstIEC with other classes .....      | 404 |
| Table 360 – Attributes of WindDynamics::WindAeroOneDimIEC .....                              | 404 |
| Table 361 – Association ends of WindDynamics::WindAeroOneDimIEC with other classes .....     | 404 |
| Table 362 – Attributes of WindDynamics::WindAeroTwoDimIEC .....                              | 405 |
| Table 363 – Association ends of WindDynamics::WindAeroTwoDimIEC with other classes .....     | 405 |
| Table 364 – Attributes of WindDynamics::WindMechIEC .....                                    | 406 |
| Table 365 – Association ends of WindDynamics::WindMechIEC with other classes .....           | 406 |
| Table 366 – Attributes of WindDynamics::WindPitchContPowerIEC .....                          | 407 |
| Table 367 – Association ends of WindDynamics::WindPitchContPowerIEC with other classes ..... | 407 |
| Table 368 – Attributes of WindDynamics::WindContRotorRIEC .....                              | 408 |
| Table 369 – Association ends of WindDynamics::WindContRotorRIEC with other classes .....     | 408 |
| Table 370 – Attributes of WindDynamics::WindContPType3IEC .....                              | 409 |
| Table 371 – Association ends of WindDynamics::WindContPType3IEC with other classes .....     | 410 |
| Table 372 – Attributes of WindDynamics::WindContPType4aIEC .....                             | 410 |
| Table 373 – Association ends of WindDynamics::WindContPType4aIEC with other classes .....    | 410 |
| Table 374 – Attributes of WindDynamics::WindContPType4bIEC .....                             | 411 |
| Table 375 – Association ends of WindDynamics::WindContPType4bIEC with other classes .....    | 411 |
| Table 376 – Attributes of WindDynamics::WindContQIEC .....                                   | 412 |
| Table 377 – Association ends of WindDynamics::WindContQIEC with other classes .....          | 413 |
| Table 378 – Attributes of WindDynamics::WindContCurrLimIEC .....                             | 413 |
| Table 379 – Association ends of WindDynamics::WindContCurrLimIEC with other classes .....    | 414 |
| Table 380 – Attributes of WindDynamics::WindContQLimIEC .....                                | 414 |
| Table 381 – Association ends of WindDynamics::WindContQLimIEC with other classes .....       | 414 |
| Table 382 – Attributes of WindDynamics::WindContQPQULimIEC .....                             | 415 |
| Table 383 – Association ends of WindDynamics::WindContQPQULimIEC with other classes .....    | 415 |
| Table 384 – Attributes of WindDynamics::WindContPitchAngleIEC .....                          | 416 |

|   |     |
|---|-----|
| Table 385 – Association ends of WindDynamics::WindContPitchAngleIEC with other classes .....                        | 416 |
| Table 386 – Attributes of WindDynamics::WindProtectionIEC .....   | 417 |
| Table 387 – Association ends of WindDynamics::WindProtectionIEC with other classes .....                            | 417 |
| Table 388 – Attributes of WindDynamics::WindPlantReactiveControlIEC.....  | 418 |
| Table 389 – Association ends of WindDynamics::WindPlantReactiveControlIEC with other classes .....                  | 419 |
| Table 390 – Attributes of WindDynamics::WindPlantFreqPcontrolIEC .....  | 420 |
| Table 391 – Association ends of WindDynamics::WindPlantFreqPcontrolIEC with other classes .....                     | 420 |
| Table 392 – Attributes of WindDynamics::WindDynamicsLookupTable.....  | 421 |
| Table 393 – Association ends of WindDynamics::WindDynamicsLookupTable with other classes .....                      | 421 |
| Table 394 – Literals of WindDynamics::WindQcontrolModeKind .....  | 422 |
| Table 395 – Literals of WindDynamics::WindUVRTQcontrolModeKind.....   | 422 |
| Table 396 – Literals of WindDynamics::WindLookupTableFunctionKind.....  | 423 |
| Table 397 – Literals of WindDynamics::WindPlantQcontrolModeKind.....  | 423 |
| Table 398 – Attributes of LoadDynamics::LoadComposite.....  | 426 |
| Table 399 – Association ends of LoadDynamics::LoadComposite with other classes .....                                | 427 |
| Table 400 – Attributes of LoadDynamics::LoadGenericNonLinear .....  | 428 |
| Table 401 – Association ends of LoadDynamics::LoadGenericNonLinear with other classes .....                         | 428 |
| Table 402 – Attributes of LoadDynamics::LoadDynamics .....  | 428 |
| Table 403 – Association ends of LoadDynamics::LoadDynamics with other classes .....                                 | 429 |
| Table 404 – Attributes of LoadDynamics::LoadAggregate .....   | 429 |
| Table 405 – Association ends of LoadDynamics::LoadAggregate with other classes .....                                | 429 |
| Table 406 – Attributes of LoadDynamics::LoadStatic .....  | 431 |
| Table 407 – Association ends of LoadDynamics::LoadStatic with other classes .....                                   | 432 |
| Table 408 – Attributes of LoadDynamics::LoadMotor .....   | 434 |
| Table 409 – Association ends of LoadDynamics::LoadMotor with other classes .....                                    | 434 |
| Table 410 – Literals of LoadDynamics::GenericNonLinearLoadModelKind .....   | 435 |
| Table 411 – Literals of LoadDynamics::StaticLoadModelKind.....  | 435 |
| Table 412 – Attributes of HVDCDynamics::HVDCDynamics .....  | 436 |
| Table 413 – Association ends of HVDCDynamics::HVDCDynamics with other classes .....                                 | 437 |
| Table 414 – Attributes of HVDCDynamics::CSCDynamics.....  | 437 |
| Table 415 – Association ends of HVDCDynamics::CSCDynamics with other classes .....                                  | 437 |
| Table 416 – Attributes of HVDCDynamics::VSCDynamics.....  | 438 |
| Table 417 – Association ends of HVDCDynamics::VSCDynamics with other classes.....                                   | 438 |
| Table 418 – Attributes of StaticVarCompensatorDynamics::StaticVarCompensatorDynamics .....                          | 439 |
| Table 419 – Association ends of StaticVarCompensatorDynamics::StaticVarCompensatorDynamics with other classes ..... | 440 |
| Table 420 – Attributes of UserDefinedModels::SynchronousMachineUserDefined .....                                    | 442 |
| Table 421 – Association ends of UserDefinedModels::SynchronousMachineUserDefined with other classes .....           | 442 |
| Table 422 – Attributes of UserDefinedModels::AsynchronousMachineUserDefined .....                                   | 443 |

|   |     |
|---|-----|
| Table 423 – Association ends of UserDefinedModels::AsynchronousMachineUserDefined with other classes .....            | 443 |
| Table 424 – Attributes of UserDefinedModels::TurbineGovernorUserDefined .....   | 444 |
| Table 425 – Association ends of UserDefinedModels::TurbineGovernorUserDefined with other classes .....                | 444 |
| Table 426 – Attributes of UserDefinedModels::TurbineLoadControllerUserDefined .....                                   | 445 |
| Table 427 – Association ends of UserDefinedModels::TurbineLoadControllerUserDefined with other classes .....          | 445 |
| Table 428 – Attributes of UserDefinedModels::MechanicalLoadUserDefined .....  | 445 |
| Table 429 – Association ends of UserDefinedModels::MechanicalLoadUserDefined with other classes .....                 | 446 |
| Table 430 – Attributes of UserDefinedModels::ExcitationSystemUserDefined .....  | 446 |
| Table 431 – Association ends of UserDefinedModels::ExcitationSystemUserDefined with other classes .....               | 447 |
| Table 432 – Attributes of UserDefinedModels::OverexcitationLimiterUserDefined .....                                   | 447 |
| Table 433 – Association ends of UserDefinedModels::OverexcitationLimiterUserDefined with other classes .....          | 448 |
| Table 434 – Attributes of UserDefinedModels::UnderexcitationLimiterUserDefined .....                                  | 448 |
| Table 435 – Association ends of UserDefinedModels::UnderexcitationLimiterUserDefined with other classes .....         | 448 |
| Table 436 – Attributes of UserDefinedModels::PowerSystemStabilizerUserDefined .....                                   | 449 |
| Table 437 – Association ends of UserDefinedModels::PowerSystemStabilizerUserDefined with other classes .....          | 449 |
| Table 438 – Attributes of UserDefinedModels::DiscontinuousExcitationControlUserDefined .....                          | 450 |
| Table 439 – Association ends of UserDefinedModels::DiscontinuousExcitationControlUserDefined with other classes ..... | 450 |
| Table 440 – Attributes of UserDefinedModels::PFVArControllerType1UserDefined .....                                    | 451 |
| Table 441 – Association ends of UserDefinedModels::PFVArControllerType1UserDefined with other classes .....           | 451 |
| Table 442 – Attributes of UserDefinedModels::VoltageAdjusterUserDefined .....   | 452 |
| Table 443 – Association ends of UserDefinedModels::VoltageAdjusterUserDefined with other classes .....                | 452 |
| Table 444 – Attributes of UserDefinedModels::PFVArControllerType2UserDefined .....                                    | 452 |
| Table 445 – Association ends of UserDefinedModels::PFVArControllerType2UserDefined with other classes .....           | 453 |
| Table 446 – Attributes of UserDefinedModels::VoltageCompensatorUserDefined .....                                      | 453 |
| Table 447 – Association ends of UserDefinedModels::VoltageCompensatorUserDefined with other classes .....             | 453 |
| Table 448 – Attributes of UserDefinedModels::LoadUserDefined .....  | 454 |
| Table 449 – Association ends of UserDefinedModels::LoadUserDefined with other classes .....                           | 454 |
| Table 450 – Attributes of UserDefinedModels::WindType1or2UserDefined .....  | 455 |
| Table 451 – Association ends of UserDefinedModels::WindType1or2UserDefined with other classes .....                   | 455 |
| Table 452 – Attributes of UserDefinedModels::WindType3or4UserDefined .....  | 455 |
| Table 453 – Association ends of UserDefinedModels::WindType3or4UserDefined with other classes .....                   | 456 |

Table 454 – Attributes of UserDefinedModels::WindPlantUserDefined ..... 456

Table 455 – Association ends of UserDefinedModels::WindPlantUserDefined with other classes ..... 457

Table 456 – Attributes of UserDefinedModels::CSCUserDefined ..... 457

Table 457 – Association ends of UserDefinedModels::CSCUserDefined with other classes ..... 457

Table 458 – Attributes of UserDefinedModels::VSCUserDefined ..... 458

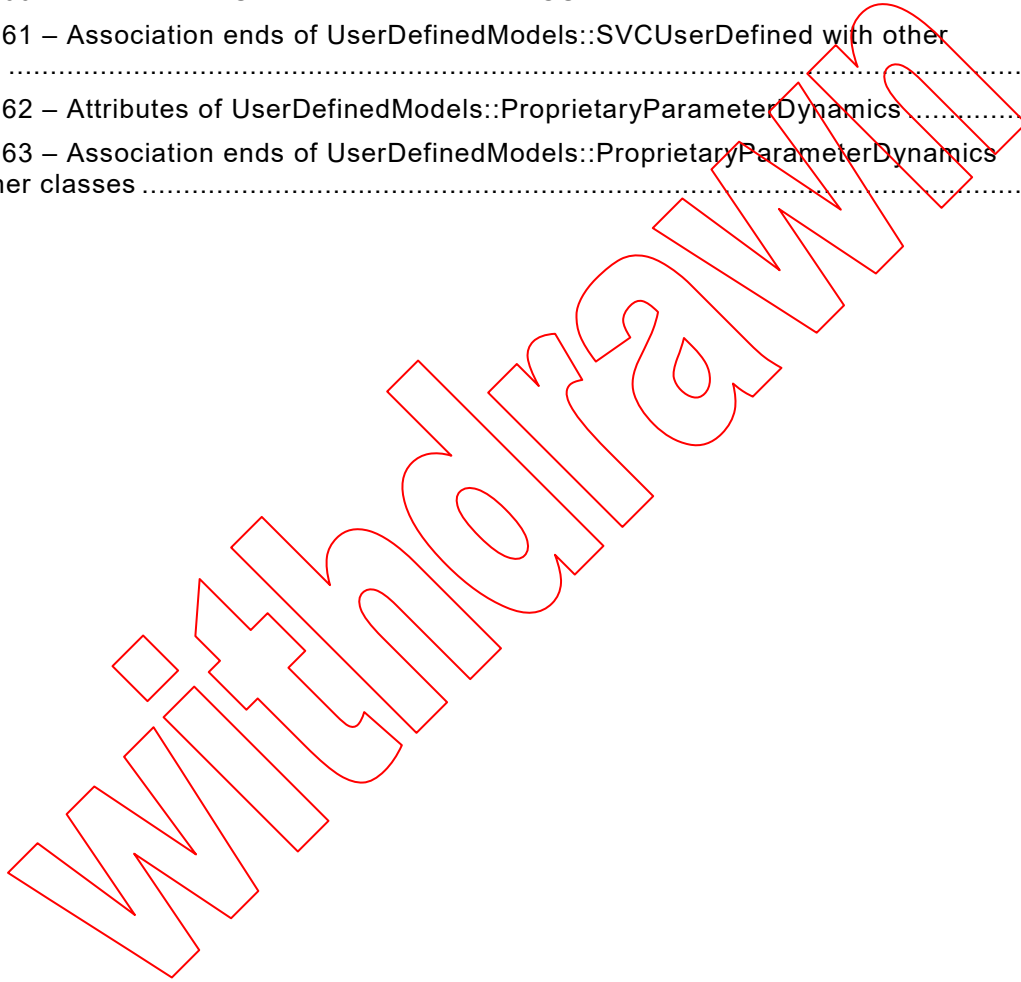
Table 459 – Association ends of UserDefinedModels::VSCUserDefined with other classes ..... 458

Table 460 – Attributes of UserDefinedModels::SVCUserDefined ..... 458

Table 461 – Association ends of UserDefinedModels::SVCUserDefined with other classes ..... 459

Table 462 – Attributes of UserDefinedModels::ProprietaryParameterDynamics ..... 459

Table 463 – Association ends of UserDefinedModels::ProprietaryParameterDynamics with other classes ..... 460



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ENERGY MANAGEMENT SYSTEM APPLICATION  
PROGRAM INTERFACE (EMS-API) –**
**Part 302: Common information model (CIM) dynamics**

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International Standard IEC 61970-302 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The text of this standard is based on the following documents:

|              |                  |
|--------------|------------------|
| FDIS         | Report on voting |
| 57/1954/FDIS | 57/1977/RVD      |

Full information on the voting for the approval of this International Standard 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 parts of the IEC 61970 series, 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 document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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Withdrawn

## INTRODUCTION

This International Standard is one of the IEC 61970 series which defines an application program interface (API) for an energy management system (EMS).

The principal objective of the IEC 61970 series is to produce standards that facilitate the integration of EMS applications developed independently by different vendors, between entire EMSs developed independently, or between an EMS and other systems concerned with different aspects of power system operations, such as generation or distribution management systems (DMS). This is accomplished by defining application program interfaces to enable these applications or systems access to public data and exchange information independent of how such information is represented internally.

The common information model (CIM) specifies the semantics for this API. The component interface specifications (CIS), which are contained in other parts of the IEC 61970 standards, specify the content of the messages exchanged.

The CIM is an abstract model that represents all the major objects in an electric utility enterprise typically needed to model the operational aspects of a utility. This model includes public classes and attributes for these objects, as well as the relationships between them.

IEC 61970-301 defines the CIM Base set of packages which provide a logical view of the functional aspects of an energy management system.

This part of the standard, IEC 61970-302, builds on IEC 61970-301 and provides the specifications for the exchange models representing dynamic behaviour of the majority of power system components in common use today by utilities to perform system simulation studies for system dynamic assessment and for planning purposes.