

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Framework for energy market communications –
Part 451-3: Transmission capacity allocation business process (explicit or
implicit auction) and contextual models for European market**

**Cadre pour les communications pour le marché de l'énergie –
Partie 451-3: Processus métier d'attribution de la capacité de transport (vente
aux enchères explicite ou implicite) et modèles contextuels pour le marché
européen**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2014 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Catalogue IEC - webstore.iec.ch/catalogue

Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

Recherche de publications IEC - www.iec.ch/searchpub

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 14 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary

Plus de 55 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.



IEC 62325-451-3

Edition 1.0 2014-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Framework for energy market communications –
Part 451-3: Transmission capacity allocation business process (explicit or
implicit auction) and contextual models for European market**

**Cadre pour les communications pour le marché de l'énergie –
Partie 451-3: Processus métier d'attribution de la capacité de transport (vente
aux enchères explicite ou implicite) et modèles contextuels pour le marché
européen**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE **XH**
CODE PRIX

ICS 33.200

ISBN 978-2-8322-1677-4

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	14
INTRODUCTION.....	16
1 Scope.....	17
2 Normative references	17
3 Terms and definitions	18
4 Document contextual model and message assembly model basic concepts	20
4.1 Overview	20
4.2 European style market package (ESMP) structure	22
4.3 From the European style market profile to the document contextual model	23
4.4 From the document contextual model to the message assembly model.....	23
4.5 From the assembly model to the XML schema	23
5 The transmission capacity allocation business process.....	23
5.1 Overall business context.....	23
5.2 Establish offered capacity process.....	25
5.3 Explicit auction process	26
5.3.1 Overview of explicit auction process	26
5.3.2 Bid and allocate capacity.....	26
5.3.3 Publish auction results.....	27
5.3.4 Trade and negotiate allocated capacity.....	27
5.3.5 Capacity rights resale	28
5.3.6 Possibility of curtailment of allocated capacity	28
5.3.7 Designate interconnection trade responsible for nomination.....	28
5.3.8 Nominate use of border capacity.....	29
5.3.9 Validate nominations	29
5.4 Implicit auction process	29
5.4.1 Overview implicit auction process	29
5.4.2 Submit bids and offers to local exchange.....	30
5.4.3 Implicit auction	30
5.4.4 Publish exchange results	30
5.4.5 Publish trade results	30
5.5 Business rules for the transmission capacity allocation process	31
5.5.1 General rules.....	31
5.5.2 Rules governing the Bid_MarketDocument.....	31
5.5.3 Rules governing the Capacity_MarketDocument	32
5.5.4 Rules governing the AllocationResult_MarketDocument.....	32
5.5.5 Rules governing the TotalAllocationResult_MarketDocument.....	33
5.5.6 Rules governing the Rights_MarketDocument.....	33
6 Contextual and assembly models	35
6.1 Bid contextual model.....	35
6.1.1 Overview of the model	35
6.1.2 IsBasedOn relationships from the European style market profile.....	36
6.1.3 Detailed Bid contextual model	36
6.2 Bid assembly model.....	43
6.2.1 Overview of the model	43
6.2.2 IsBasedOn relationships from the European style market profile.....	44
6.2.3 Detailed Bid assembly model.....	44

6.3	Capacity auction specification contextual model	48
6.3.1	Overview of the model	48
6.3.2	IsBasedOn relationships from the European style market profile	49
6.3.3	Detailed Capacity auction specification contextual model	49
6.4	Capacity auction specification assembly model	59
6.4.1	Overview of the model	59
6.4.2	IsBasedOn relationships from the European style market profile	60
6.4.3	Detailed Capacity auction specification assembly model	60
6.5	Capacity contextual model	67
6.5.1	Overview of the model	67
6.5.2	IsBasedOn relationships from the European style market profile	68
6.5.3	Detailed Capacity contextual model	68
6.6	Capacity assembly model	75
6.6.1	Overview of the model	75
6.6.2	IsBasedOn relationships from the European style market profile	76
6.6.3	Detailed Capacity assembly model	76
6.7	Allocation result contextual model	80
6.7.1	Overview of the model	80
6.7.2	IsBasedOn relationships from the European style market profile	81
6.7.3	Detailed Allocation result contextual model	81
6.8	Allocation result assembly model	90
6.8.1	Overview of the model	90
6.8.2	IsBasedOn relationships from the European style market profile	92
6.8.3	Detailed Allocation result assembly model	92
6.9	Total allocation result contextual model	97
6.9.1	Overview of the model	97
6.9.2	IsBasedOn relationships from the European style market profile	98
6.9.3	Detailed Total allocation result contextual model	99
6.10	Total allocation result assembly model	109
6.10.1	Overview of the model	109
6.10.2	IsBasedOn relationships from the European style market profile	109
6.10.3	Detailed Total allocation result assembly model	110
6.11	Implicit auction result contextual model	117
6.11.1	Overview of the model	117
6.11.2	IsBasedOn relationships from the European style market profile	118
6.11.3	Detailed Implicit auction result contextual model	118
6.12	Implicit auction result assembly model	126
6.12.1	Overview of the model	126
6.12.2	IsBasedOn relationships from the European style market profile	127
6.12.3	Detailed Implicit auction result assembly model	127
6.13	Publication contextual model	132
6.13.1	Overview of the model	132
6.13.2	IsBasedOn relationships from the European style market profile	133
6.13.3	Detailed Publication contextual model	133
6.14	Publication assembly model	142
6.14.1	Overview of the model	142
6.14.2	IsBasedOn relationships from the European style market profile	143
6.14.3	Detailed Publication assembly model	143
6.15	Rights contextual model	148

6.15.1	Overview of the model	148
6.15.2	IsBasedOn relationships from the European style market profile	149
6.15.3	Detailed Rights contextual model	150
6.16	Rights assembly model	159
6.16.1	Overview of the model	159
6.16.2	IsBasedOn relationships from the European style market profile	160
6.16.3	Detailed Rights assembly model	160
7	XML schema	165
7.1	XML schema URN Namespace rules	165
7.2	Code list URN namespace rules	165
7.3	URI rules for model documentation	166
7.3.1	Datatype	166
7.3.2	Class	166
7.3.3	Attribute	166
7.3.4	Association end role name	167
7.4	Bid_MarketDocument schema	168
7.4.1	Schema Structure	168
7.4.2	Schema description	169
7.5	CapacityAuctionSpecification_MarketDocument schema	174
7.5.1	Schema Structure	174
7.5.2	Schema description	176
7.6	Capacity_MarketDocument schema	181
7.6.1	Schema Structure	181
7.6.2	Schema description	183
7.7	AllocationResult_MarketDocument schema	188
7.7.1	Schema Structure	188
7.7.2	Schema description	190
7.8	TotalAllocationResult_MarketDocument schema	195
7.8.1	Schema Structure	195
7.8.2	Schema description	197
7.9	ImplicitAuctionResult_MarketDocument schema	202
7.9.1	Schema Structure	202
7.9.2	Schema description	204
7.10	Publication_MarketDocument schema	208
7.10.1	Schema Structure	208
7.10.2	Schema description	210
7.11	Rights_MarketDocument schema	215
7.11.1	Schema Structure	215
7.11.2	Schema description	217
	Bibliography	222
	Figure 1 – IEC 623235-450 modelling framework	21
	Figure 2 – Overview of European style market profile dependency	22
	Figure 3 – Use case of the transmission capacity allocation process	25
	Figure 4 – Establish offered capacity overview	26
	Figure 5 – Auction capacity	27
	Figure 6 – Transfer and curtailment	28
	Figure 7 – Nomination of capacity rights	29

Figure 8 – Implicit auction overview	31
Figure 9 – Bid contextual model.....	35
Figure 10 – Bid assembly model	43
Figure 11 – Capacity auction specification contextual model.....	48
Figure 12 – Capacity auction specification assembly model	59
Figure 13 – Capacity contextual model	67
Figure 14 – Capacity assembly model.....	75
Figure 15 – Allocation result contextual model.....	80
Figure 16 – Allocation result assembly model	91
Figure 17 – Total allocation result contextual model.....	98
Figure 18 – Total allocation result assembly model	109
Figure 19 – Implicit auction result contextual model	117
Figure 20 – Implicit auction result assembly model	126
Figure 21 – Publication contextual model.....	132
Figure 22 – Publication assembly model	142
Figure 23 – Rights contextual model	149
Figure 24 – Rights assembly model	159
Figure 25 – Bid_MarketDocument XML schema structure – 1/2.....	168
Figure 26 – Bid_MarketDocument XML schema structure – 2/2.....	169
Figure 27 – CapacityAuctionSpecification_MarketDocument XML schema structure – 1/2... 174	
Figure 28 – CapacityAuctionSpecification_MarketDocument XML schema structure – 2/2... 175	
Figure 29 – Capacity_MarketDocument XML schema structure – 1/2.....	182
Figure 30 – Capacity_MarketDocument XML schema structure – 2/2	183
Figure 31 – AllocationResult_MarketDocument XML schema structure – 1/2.....	188
Figure 32 – AllocationResult_MarketDocument XML schema structure – 2/2.....	189
Figure 33 – TotalAllocationResult_MarketDocument XML schema structure – 1/2.....	195
Figure 34 – TotalAllocationResult_MarketDocument XML schema structure – 2/2.....	196
Figure 35 – ImplicitAuctionResult_MarketDocument XML schema structure – 1/2	202
Figure 36 – ImplicitAuctionResult_MarketDocument XML schema structure – 2/2	203
Figure 37 – Publication_MarketDocument XML schema structure – 1/2	208
Figure 38 – Publication_MarketDocument XML schema structure – 2/2	209
Figure 39 – Rights_MarketDocument XML schema structure – 1/2.....	215
Figure 40 – Rights_MarketDocument XML schema structure – 2/2.....	216
Table 1 – Bid indicators dependency	32
Table 2 – Rights_MarketDocument dependency table.....	34
Table 3 – IsBasedOn dependency	36
Table 4 – Attributes of Bid contextual model::Bid_MarketDocument.....	36
Table 5 – Association ends of Bid contextual model:: Bid_MarketDocument with other classes	37
Table 6 – Attributes of Bid contextual model::Auction.....	37
Table 7 – Attributes of Bid contextual model::BidTimeSeries.....	38
Table 8 – Association ends of Bid contextual model:: BidTimeSeries with other classes	38

Table 9 – Attributes of Bid contextual model::Currency_Unit	39
Table 10 – Attributes of Bid contextual model::Domain	39
Table 11 – Attributes of Bid contextual model::MarketParticipant	39
Table 12 – Association ends of Bid contextual model:: MarketParticipant with other classes	40
Table 13 – Attributes of Bid contextual model::MarketRole.....	40
Table 14 – Attributes of Bid contextual model::Measure_Unit.....	40
Table 15 – Attributes of Bid contextual model::Point	41
Table 16 – Association ends of Bid contextual model::Point with other classes	41
Table 17 – Attributes of Bid contextual model::Price	41
Table 18 – Attributes of Bid contextual model::Series_Period	41
Table 19 – Association ends of Bid contextual model::Series_Period with other classes	42
Table 20 – Attributes of Bid contextual model::Time_Period.....	42
Table 21 – IsBasedOn dependency.....	44
Table 22 – Attributes of Bid assembly model::Bid_MarketDocument	45
Table 23 – Association ends of Bid assembly model:: Bid_MarketDocument with other classes	45
Table 24 – Attributes of Bid assembly model::BidTimeSeries	46
Table 25 – Association ends of Bid assembly model: BidTimeSeries with other classes.....	46
Table 26 – Attributes of Bid assembly model::Point.....	47
Table 27 – Attributes of Bid assembly model::Series_Period.....	47
Table 28 – Association ends of Bid assembly model::Series_Period with other classes	47
Table 29 – IsBasedOn dependency.....	49
Table 30 – Attributes of Capacity auction specification contextual model::CapacityAuctionSpecification_MarketDocument	50
Table 31 – Association ends of Capacity auction specification contextual model::CapacityAuctionSpecification_MarketDocument with other classes.....	50
Table 32 – Attributes of Capacity auction specification contextual model::AttributeInstanceComponent	51
Table 33 – Attributes of Capacity auction specification contextual model::Auction.....	51
Table 34 – Attributes of Capacity auction specification contextual model::Auction_TimeSeries	52
Table 35 – Association ends of Capacity auction specification contextual model::Auction_TimeSeries with other classes.....	52
Table 36 – Attributes of Capacity auction specification contextual model::Contract_MarketAgreement.....	54
Table 37 – Attributes of Capacity auction specification contextual model::Currency_Unit	54
Table 38 – Attributes of Capacity auction specification contextual model::Date_MarketAgreement.....	55
Table 39 – Attributes of Capacity auction specification contextual model::Domain	55
Table 40 – Attributes of Capacity auction specification contextual model::MarketParticipant	55
Table 41 – Association ends of Capacity auction specification contextual model::MarketParticipant with other classes	55
Table 42 – Attributes of Capacity auction specification contextual model::MarketRole	56
Table 43 – Attributes of Capacity auction specification contextual model::Measure_Unit.....	56

Table 44 – Attributes of Capacity auction specification contextual model::Point	56
Table 45 – Attributes of Capacity auction specification contextual model::Process	57
Table 46 – Attributes of Capacity auction specification contextual model::Reason	57
Table 47 – Attributes of Capacity auction specification contextual model::RightsCharacteristics_Auction	57
Table 48 – Attributes of Capacity auction specification contextual model::Series_Period	58
Table 49 – Association ends of Capacity auction specification contextual model::Series_Period with other classes	58
Table 50 – Attributes of Capacity auction specification contextual model::Time_Period	58
Table 51 – IsBasedOn dependency	60
Table 52 – Attributes of Capacity auction specification assembly model::CapacityAuctionSpecification_MarketDocument	61
Table 53 – Association ends of Capacity auction specification assembly model::CapacityAuctionSpecification_MarketDocument with other classes	61
Table 54 – Attributes of Capacity auction specification assembly model::AttributeInstanceComponent	62
Table 55 – Attributes of Capacity auction specification assembly model::Auction_TimeSeries	62
Table 56 – Association ends of Capacity auction specification assembly model::Auction_TimeSeries with other classes	65
Table 57 – Attributes of Capacity auction specification assembly model::Point	65
Table 58 – Attributes of Capacity auction specification assembly model::Reason	66
Table 59 – Attributes of Capacity auction specification assembly model::RightsCharacteristics_Auction	66
Table 60 – Attributes of Capacity auction specification assembly model::Series_Period	66
Table 61 – Association ends of Capacity auction specification assembly model::Series_Period with other classes	66
Table 62 – IsBasedOn dependency	68
Table 63 – Attributes of Capacity contextual model::Capacity_MarketDocument	68
Table 64 – Association ends of Capacity contextual model:: Capacity_MarketDocument with other classes	69
Table 65 – Attributes of Capacity contextual model::Auction	69
Table 66 – Attributes of Capacity contextual model::Domain	70
Table 67 – Attributes of Capacity contextual model::MarketParticipant	70
Table 68 – Association ends of Capacity contextual model:: MarketParticipant with other classes	70
Table 69 – Attributes of Capacity contextual model::MarketRole	71
Table 70 – Attributes of Capacity contextual model::Measure_Unit	71
Table 71 – Attributes of Capacity contextual model::Point	71
Table 72 – Association ends of Capacity contextual model::Point with other classes	71
Table 73 – Attributes of Capacity contextual model::Process	72
Table 74 – Attributes of Capacity contextual model::Reason	72
Table 75 – Attributes of Capacity contextual model::Series_Period	72
Table 76 – Association ends of Capacity contextual model:: Series_Period with other classes	73
Table 77 – Attributes of Capacity contextual model::Time_Period	73

Table 78 – Attributes of Capacity contextual model::TimeSeries	73
Table 79 – Association ends of Capacity contextual model:: TimeSeries with other classes	74
Table 80 – IsBasedOn dependency.....	76
Table 81 – Attributes of Capacity assembly model::Capacity_MarketDocument	76
Table 82 – Association ends of Capacity assembly model:: Capacity_MarketDocument with other classes	77
Table 83 – Attributes of Capacity assembly model::Point	77
Table 84 – Association ends of Capacity assembly model::Point with other classes	78
Table 85 – Attributes of Capacity assembly model::Reason	78
Table 86 – Attributes of Capacity assembly model::Series_Period	78
Table 87 – Association ends of Capacity assembly model:: Series_Period with other classes	78
Table 88 – Attributes of Capacity assembly model::TimeSeries.....	79
Table 89 – Association ends of Capacity assembly model:: TimeSeries with other classes	79
Table 90 – IsBasedOn dependency.....	81
Table 91 – Attributes of Allocation result contextual model::AllocationResult_MarketDocument	82
Table 92 – Association ends of Allocation result contextual model::AllocationResult_MarketDocument with other classes	82
Table 93 – Attributes of Allocation result contextual model::Auction	83
Table 94 – Attributes of Allocation result contextual model::BidDocument_MarketDocument.....	83
Table 95 – Association ends of Allocation result contextual model::BidDocument_MarketDocument with other classes	84
Table 96 – Attributes of Allocation result contextual model::BidTimeSeries	84
Table 97 – Attributes of Allocation result contextual model:: Contract_MarketAgreement	84
Table 98 – Attributes of Allocation result contextual model::Currency_Unit	85
Table 99 – Attributes of Allocation result contextual model::Domain.....	85
Table 100 – Attributes of Allocation result contextual model::MarketParticipant	85
Table 101 – Association ends of Allocation result contextual model:: MarketParticipant with other classes	85
Table 102 – Attributes of Allocation result contextual model::MarketRole.....	86
Table 103 – Attributes of Allocation result contextual model::Measure_Unit	86
Table 104 – Attributes of Allocation result contextual model::Point.....	86
Table 105 – Association ends of Allocation result contextual model::Point with other classes	87
Table 106 – Attributes of Allocation result contextual model::Price.....	87
Table 107 – Attributes of Allocation result contextual model::Reason.....	87
Table 108 – Attributes of Allocation result contextual model::Series_Period.....	88
Table 109 – Association ends of Allocation result contextual model::Series_Period with other classes	88
Table 110 – Attributes of Allocation result contextual model::Time_Period.....	88
Table 111 – Attributes of Allocation result contextual model::TimeSeries	89

IEC STANDARD PREVIEW
 (standards.iteh.ai)
 IEC 62325-451-3:2014
<https://standards.iteh.ai/catalog/standards/sist/0299c444-a8e9-49bf-9ad7-b740b479f8cc/iec-62325-451-3-2014>

Table 112 – Association ends of Allocation result contextual model::TimeSeries with other classes	89
Table 113 – IsBasedOn dependency.....	92
Table 114 – Attributes of Allocation result assembly model::AllocationResult_MarketDocument	93
Table 115 – Association ends of Allocation result assembly model::AllocationResult_MarketDocument with other classes	94
Table 116 – Attributes of Allocation result assembly model::Point.....	94
Table 117 – Association ends of Allocation result assembly model::Point with other classes	94
Table 118 – Attributes of Allocation result assembly model::Reason	95
Table 119 – Attributes of Allocation result assembly model::Series_Period	95
Table 120 – Association ends of Allocation result assembly model::Series_Period with other classes	95
Table 121 – Attributes of Allocation result assembly model::TimeSeries	96
Table 122 – Association ends of Allocation result assembly model::TimeSeries with other classes	97
Table 123 – IsBasedOn dependency.....	99
Table 124 – Attributes of Total allocation result contextual model::TotalAllocationResult_MarketDocument	99
Table 125 – Association ends of Total allocation result contextual model::TotalAllocationResult_MarketDocument with other classes	100
Table 126 – Attributes of Total allocation result contextual model::Auction	101
Table 127 – Attributes of Total allocation result contextual model::BiddingParty_MarketParticipant.....	101
Table 128 – Attributes of Total allocation result contextual model::BidDocument_MarketDocument.....	101
Table 129 – Association ends of Total allocation result contextual model::BidDocument_MarketDocument with other classes	102
Table 130 – Attributes of Total allocation result contextual model::BidTimeSeries.....	102
Table 131 – Attributes of Total allocation result contextual model::Currency_Unit.....	102
Table 132 – Attributes of Total allocation result contextual model::Domain	103
Table 133 – Attributes of Total allocation result contextual model::MarketAgreement.....	103
Table 134 – Attributes of Total allocation result contextual model::MarketParticipant	103
Table 135 – Association ends of Total allocation result contextual model::MarketParticipant with other classes	103
Table 136 – Attributes of Total allocation result contextual model::MarketRole	104
Table 137 – Attributes of Total allocation result contextual model::Measure_Unit.....	104
Table 138 – Attributes of Total allocation result contextual model::NoBidAuction_TimeSeries	104
Table 139 – Association ends of Total allocation result contextual model::NoBidAuction_TimeSeries with other classes	105
Table 140 – Attributes of Total allocation result contextual model::Point	105
Table 141 – Association ends of Total allocation result contextual model::Point with other classes	105
Table 142 – Attributes of Total allocation result contextual model::Price	106
Table 143 – Attributes of Total allocation result contextual model::Reason	106
Table 144 – Attributes of Total allocation result contextual model::Series_Period	106

Table 145 – Association ends of Total allocation result contextual model::Series_Period with other classes	107
Table 146 – Attributes of Total allocation result contextual model::Time_Period.....	107
Table 147 – Attributes of Total allocation result contextual model::TimeSeries.....	107
Table 148 – Association ends of Total allocation result contextual model::TimeSeries with other classes	108
Table 149 – IsBasedOn dependency.....	110
Table 150 – Attributes of Total allocation result assembly model::TotalAllocationResult_MarketDocument	111
Table 151 – Association ends of Total allocation result assembly model::TotalAllocationResult_MarketDocument with other classes.....	112
Table 152 – Attributes of Total allocation result assembly model::NoBidAuction_TimeSeries	112
Table 153 – Association ends of Total allocation result assembly model::NoBidAuction_TimeSeries with other classes	113
Table 154 – Attributes of Total allocation result assembly model::Point	113
Table 155 – Association ends of Total allocation result assembly model::Point with other classes	113
Table 156 – Attributes of Total allocation result assembly model::Reason.....	114
Table 157 – Attributes of Total allocation result assembly model::Series_Period.....	114
Table 158 – Association ends of Total allocation result assembly model::Series_Period with other classes	114
Table 159 – Attributes of Total allocation result assembly model::TimeSeries	115
Table 160 – Association ends of Total allocation result assembly model::TimeSeries with other classes	116
Table 161 – IsBasedOn dependency.....	118
Table 162 – Attributes of Implicit auction result contextual model::ImplicitAuctionResult_MarketDocument.....	119
Table 163 – Association ends of Implicit auction result contextual model::ImplicitAuctionResult_MarketDocument with other classes	119
Table 164 – Attributes of Implicit auction result contextual model::Auction.....	120
Table 165 – Attributes of Implicit auction result contextual model::Currency_Unit	120
Table 166 – Attributes of Implicit auction result contextual model::Domain.....	120
Table 167 – Attributes of Implicit auction result contextual model::MarketAgreement.....	121
Table 168 – Attributes of Implicit auction result contextual model::MarketParticipant	121
Table 169 – Association ends of Implicit auction result contextual model::MarketParticipant with other classes	121
Table 170 – Attributes of Implicit auction result contextual model::MarketRole.....	121
Table 171 – Attributes of Implicit auction result contextual model::Measure_Unit	122
Table 172 – Attributes of Implicit auction result contextual model::Point	122
Table 173 – Association ends of Implicit auction result contextual model::Point with other classes	122
Table 174 – Attributes of Implicit auction result contextual model::Price	123
Table 175 – Attributes of Implicit auction result contextual model::Reason.....	123
Table 176 – Attributes of Implicit auction result contextual model::Series_Period.....	123
Table 177 – Association ends of Implicit auction result contextual model::Series_Period with other classes.....	124

iTech STANDARD PREVIEW
(standards.itech.ai)

<https://standards.itech.ai/catalog/standards/sist/0299e444-a8e9-49bf-9ad7-b740ff9479fe/iec-62325-451-3-2014>

Table 178 – Attributes of Implicit auction result contextual model::Time_Period	124
Table 179 – Attributes of Implicit auction result contextual model::TimeSeries	124
Table 180 – Association ends of Implicit auction result contextual model::TimeSeries with other classes	125
Table 181 – IsBasedOn dependency.....	127
Table 182 – Attributes of Implicit auction result assembly model::ImplicitAuctionResult_MarketDocument	128
Table 183 – Association ends of Implicit auction result assembly model::ImplicitAuctionResult_MarketDocument with other classes	128
Table 184 – Attributes of Implicit auction result assembly model::Point.....	129
Table 185 – Attributes of Implicit auction result assembly model::Reason	129
Table 186 – Attributes of Implicit auction result assembly model::Series_Period	129
Table 187 – Association ends of Implicit auction result assembly model::Series_Period with other classes	130
Table 188 – Attributes of Implicit auction result assembly model::TimeSeries	130
Table 189 – Association ends of Implicit auction result assembly model::TimeSeries with other classes	131
Table 190 – IsBasedOn dependency.....	133
Table 191 – Attributes of Publication contextual model::Publication_MarketDocument	134
Table 192 – Association ends of Publication contextual model::Publication_MarketDocument with other classes	134
Table 193 – Attributes of Publication contextual model::AttributeInstanceComponent	135
Table 194 – Attributes of Publication contextual model::Auction.....	135
Table 195 – Attributes of Publication contextual model::Contract_MarketAgreement.....	135
Table 196 – Attributes of Publication contextual model::Currency_Unit	136
Table 197 – Attributes of Publication contextual model::Domain	136
Table 198 – Attributes of Publication contextual model::MarketParticipant	136
Table 199 – Association ends of Publication contextual model::MarketParticipant with other classes	136
Table 200 – Attributes of Publication contextual model::MarketRole.....	137
Table 201 – Attributes of Publication contextual model::Measure_Unit.....	137
Table 202 – Attributes of Publication contextual model::Point	137
Table 203 – Association ends of Publication contextual model::Point with other classes	138
Table 204 – Attributes of Publication contextual model::Price	138
Table 205 – Attributes of Publication contextual model::Reason	138
Table 206 – Attributes of Publication contextual model::Series_Period	139
Table 207 – Association ends of Publication contextual model::Series_Period with other classes	139
Table 208 – Attributes of Publication contextual model::Time_Period.....	139
Table 209 – Attributes of Publication contextual model::TimeSeries.....	139
Table 210 – Association ends of Publication contextual model::TimeSeries with other classes	140
Table 211 – Attributes of Publication contextual model::Winners_MarketParticipant	141
Table 212 – IsBasedOn dependency.....	143
Table 213 – Attributes of Publication assembly model::Publication_MarketDocument	143

Table 214 – Association ends of Publication assembly model::Publication_MarketDocument with other classes	144
Table 215 – Attributes of Publication assembly model::Point.....	144
Table 216 – Association ends of Publication assembly model::Point with other classes	145
Table 217 – Attributes of Publication assembly model::Reason	145
Table 218 – Attributes of Publication assembly model::Series_Period.....	146
Table 219 – Association ends of Publication assembly model::Series_Period with other classes	146
Table 220 – Attributes of Publication assembly model::TimeSeries	146
Table 221 – Association ends of Publication assembly model::TimeSeries with other classes	147
Table 222 – Attributes of Publication assembly model::Winners_MarketParticipant.....	148
Table 223 – IsBasedOn dependency.....	150
Table 224 – Attributes of Rights contextual model::Rights_MarketDocument	150
Table 225 – Association ends of Rights contextual model:: Rights_MarketDocument with other classes	151
Table 226 – Attributes of Rights contextual model::Auction	152
Table 227 – Attributes of Rights contextual model::Currency_Unit	152
Table 228 – Attributes of Rights contextual model::Domain.....	152
Table 229 – Attributes of Rights contextual model::MarketAgreement	152
Table 230 – Attributes of Rights contextual model::MarketParticipant	153
Table 231 – Association ends of Rights contextual model:: MarketParticipant with other classes	153
Table 232 – Attributes of Rights contextual model::MarketRole	153
Table 233 – Attributes of Rights contextual model::Measure_Unit.....	154
Table 234 – Attributes of Rights contextual model::Point	154
Table 235 – Association ends of Rights contextual model::Point with other classes	154
Table 236 – Attributes of Rights contextual model::Previous_MarketAgreement.....	155
Table 237 – Attributes of Rights contextual model::Price	155
Table 238 – Attributes of Rights contextual model::Reason.....	155
Table 239 – Attributes of Rights contextual model::Rights_MarketParticipant.....	155
Table 240 – Attributes of Rights contextual model::Series_Period.....	156
Table 241 – Association ends of Rights contextual model:: Series_Period with other classes	156
Table 242 – Attributes of Rights contextual model::Time_Period	156
Table 243 – Attributes of Rights contextual model::TimeSeries	157
Table 244 – Association ends of Rights contextual model::TimeSeries with other classes	157
Table 245 – IsBasedOn dependency.....	160
Table 246 – Attributes of Rights assembly model::Rights_MarketDocument.....	161
Table 247 – Association ends of Rights assembly model:: Rights_MarketDocument with other classes	161
Table 248 – Attributes of Rights assembly model::Point.....	162
Table 249 – Attributes of Rights assembly model::Reason	162
Table 250 – Attributes of Rights assembly model::Series_Period	162

Table 251 – Association ends of Rights assembly model:: Series_Period with other classes	163
Table 252 – Attributes of Rights assembly model::TimeSeries	163
Table 253 – Association ends of Rights assembly model:: TimeSeries with other classes	165

iTeh STANDARD PREVIEW (standards.iteh.ai)

[IEC 62325-451-3:2014](https://standards.iteh.ai/catalog/standards/sist/0299c444-a8e9-49bf-9ad7-b740ff9479fe/iec-62325-451-3-2014)

<https://standards.iteh.ai/catalog/standards/sist/0299c444-a8e9-49bf-9ad7-b740ff9479fe/iec-62325-451-3-2014>