

TECHNICAL REPORT

Communication networks and systems for power utility automation –
Part 90-30: IEC 61850 Function Modelling in SCL

(<https://standards.iteh.ai>)

Document Preview

[IEC TR 61850-90-30:2025](https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025)

<https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025>





TECHNICAL REPORT

Communication networks and systems for power utility automation –
Part 90-30: IEC 61850 Function Modelling in SCL

iteh Standards
(<https://standards.iteh.ai>)
Document Preview

[IEC TR 61850-90-30:2025](https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025)

<https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.200

ISBN 978-2-8327-0068-6

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	11
INTRODUCTION.....	13
1 Scope.....	14
1.1 General.....	14
1.2 Published versions of this standard and related namespace name.....	14
1.3 Identification of the Code Components.....	15
1.3.1 IEC 61850-6-100 XML namespace compliant with IEC 61850-6:2018 edition 2 amendment 1.....	15
1.3.2 IEC 61850-6-100 XML namespace compliant with IEC 61850-6:2024 edition 2 amendment 2.....	16
1.3.3 IEC/TR 61850-90-30 SSD example.....	16
1.4 Code Component Distribution.....	16
1.4.1 General.....	16
1.4.2 SCL extension namespace code component.....	17
1.4.3 SSD example code component.....	17
2 Normative references.....	17
3 Terms and definitions.....	18
4 Functions and Applications.....	19
4.1 General.....	19
4.2 Functions.....	19
4.3 Application Schemes.....	19
4.4 Examples of Functions and Applications.....	21
4.4.1 General.....	21
4.4.2 1 ½ Breaker Control Application.....	21
4.4.3 Breaker Failure Application.....	21
4.4.4 Power Measurement Application.....	22
4.4.5 Power Transformer Applications.....	23
5 SCL extension representation concepts.....	26
5.1 General.....	26
5.2 PathName.....	26
5.3 SCL Location.....	27
5.4 Condition for attribute presence.....	27
6 Data Flow inside and between Functions.....	28
6.1 General.....	28
6.2 Data Flow.....	28
6.2.1 General.....	28
6.2.2 SCL Location.....	28
6.2.3 SourceRef.....	28
6.2.4 ControlRef.....	31
6.2.5 SourceRef and ControlRef connection.....	32
6.3 Data flow resolution.....	35
6.3.1 General.....	35
6.3.2 SCL Location.....	37
6.3.3 SubscriberLNode.....	37
6.3.4 ControllingLNode.....	37
6.4 Service-related Elements.....	38
6.4.1 SpecServiceType.....	38

6.4.2	ServiceSpecifications	40
7	LNode Data specification	53
7.1	SCL Location	53
7.2	General.....	53
7.3	Specification of Data Objects and Attributes	53
7.3.1	General	53
7.3.2	DOS/SDS/DAS Definition.....	53
7.4	LNode Mapping Documentation	57
8	LNodeSpecNaming	58
8.1	SCL Location	58
8.2	Definition	58
9	ProcessResource	60
9.1	SCL Location	60
9.2	Definition	60
9.3	SCL representation	67
9.3.1	General	67
9.3.2	ProcessResources.....	67
9.3.3	ProcessResource	67
9.3.4	Resource.....	68
10	PowerSystemRelation.....	70
10.1	SCL Location	70
10.2	Definition	70
10.3	SCL representation.....	72
10.3.1	General	72
10.3.2	PowerSystemRelations.....	72
10.3.3	PowerSystemRelation.....	72
11	SCL elements reference and categorisation.....	73
11.1	General.....	73
11.2	Function Reference.....	73
11.2.1	General	73
11.2.2	FunctionRef.....	73
11.2.3	FunctionCatRef.....	74
11.3	FunctionCategory.....	74
11.3.1	SCL Location.....	74
11.3.2	General	74
11.3.3	SCL representation.....	75
11.4	Allocation Role.....	76
11.4.1	SCL Location.....	76
11.4.2	Definition	76
11.4.3	Example 1	77
11.4.4	Example 2	79
11.4.5	Example 3	81
12	Variables	82
12.1	SCL Location	82
12.2	Definition	82
12.3	SCL representation	84
12.3.1	General	84
12.3.2	Variable.....	84

ITeH Standards

(<https://standards.iteh.ai>)

Document Preview

<https://standards.iteh.ai/catalog/standards/iec/129bb1b7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025>

12.3.3	VariableApplyTo	85
13	Behavior description	88
13.1	SCL Location	88
13.2	Definition	88
13.3	SCL representation	89
13.3.1	General	89
13.3.2	BehaviorDescription	89
13.3.3	InputVar and OutputVar	91
13.3.4	IEC 61131 BehaviorDescription use cases	93
14	Process Echo	95
14.1	SCL location	95
14.2	Definition and rules	95
14.3	Use cases	96
14.3.1	Use case 1: circuit breaker position transmission	96
14.3.2	Use case 2: measurement transmission	97
15	Bay Type	98
15.1	SCL location	98
15.2	Definition	98
16	Specification Workflow, tools and file types	98
16.1	FSD	98
16.1.1	Definition and rules	98
16.1.2	SCL content	99
16.1.3	FunctionTemplate	99
16.1.4	Usage	100
16.2	SSD Template	101
16.3	S-IED	101
16.3.1	General	101
16.3.2	Logical Node and Function Allocation	101
16.3.3	S-IED as formal Specification	102
16.3.4	S-IEDs for Testing and Simulation	102
16.3.5	S-IED identification inside an SCL file	103
16.3.6	From Functional Specification to the S-IED	103
16.3.7	ISD	104
16.4	Process SCL files	107
16.4.1	General	107
16.4.2	Process ICD	107
16.4.3	Process IID	110
16.4.4	Instantiating a process ICD/IID in an SCD – Implementation rules	112
16.4.5	Documenting the implementation of the IED to the specification	114
16.5	Engineering Rights applied to functions	131
16.5.1	Definition	131
16.5.2	Rules from IEC 61850-6	131
16.5.3	The SCC file format	132
16.5.4	The project ID	133
16.5.5	The checkout ID	134
16.5.6	Combining SCC and SED workflows	143
16.5.7	Additional example adding SCL references	144
16.5.8	Use cases	146

ITEH Standards

<https://standards.iteh.ai/>

Document Preview

IEC TR 61850-90-30:2025

<https://standards.iteh.ai/catalog/standards/iec/61850-90-30-2025>

16.5.9	Rules regarding engineering rights on process section elements	150
16.6	Information flow between tools	151
16.6.1	General	151
16.6.2	Response of a process ICD to a system specification or IED specification template	151
16.6.3	Response of a process IID to a project SCD	151
16.6.4	Response of a process IID to a project specific ISD/SSD	152
16.6.5	Response of a process ICD to an SSD with allocation roles	152
16.6.6	Global overview of tools and interfaces	152
17	SciFileReferences extension	153
17.1	General	153
17.2	Use of the SciFileReference for FSD	154
17.3	Use of SciFileReference for ASD	154
17.4	Use of other references	155
17.4.1	General	155
17.4.2	SciFileReference for SSD in ISD	155
17.4.3	SciFileReference for ISD in ICD	156
17.4.4	SciFileReference for ISD in SCD	156
17.4.5	SciFileReference for ISD in IID	156
17.4.6	SciFileReference for ICD in IID	156
17.4.7	SciFileReference for ICD in SCD	156
17.4.8	SciFileReference for IID in SCD	157
17.4.9	SciFileReference for SCD in IID	157
17.4.10	SciFileReference for SSD in SCD	157
17.4.11	SciFileReference for SCD in SED/SCC	157
17.4.12	CheckoutID from SED/SCC in SCD/SED/SCC	157
17.4.13	SciFileReference for SSD in ICD	157
17.4.14	SciFileReference for IID in SSD	158
17.4.15	SciFileReference for SSD in SSD	158
18	UUIDs	158
18.1	General	158
18.2	Scenario 1:	160
18.2.1	General	160
18.2.2	Subscenario 1: zoom on ASD	160
18.2.3	Subscenario 2: creating the project SSD	162
18.2.4	Subscenario 3: creating the process ICD	163
18.2.5	Subscenario 4: creating SCD	164
18.3	Other examples	165
18.3.1	General	165
18.3.2	Scenario 2	166
18.3.3	Scenario 3	166
Annex A (informative)	Predefined Function classifications	167
A.1	Overview	167
A.2	Basic Function Categories	167
A.3	Protection	167
A.4	Automation	168
A.5	Extended Function Categories	169
A.6	Function scope	169

Annex B (informative) Service section rules for ISD files service section rules for ISD files	170
Annex C (informative) Management of different Schema version.....	180
C.1 General.....	180
C.2 Upgrading rules from 2019B9 to 2019C1.....	180
C.3 Downgrading rules from 2019C1 to 2019B9	181
Annex D (informative) Example SCL File	183
Bibliography.....	184
Figure 1 – Breaker Failure Protection from IEC TR 61850-7-500.....	20
Figure 2 – Breaker Failure Application	20
Figure 3 – 1 ½ Breaker Functions	21
Figure 4 – Breaker Failure Application	22
Figure 5 – Power Measurement Application	23
Figure 6 – 3 Transformer Differential Protection.....	24
Figure 7 – 3 Transformer Winding Overcurrent Protection.....	25
Figure 8 – 3 Transformer Voltage Control	26
Figure 9 – Absolute PathName Examples with Object Reference	27
Figure 10 – Data Flow specification with SourceRefs inside a Function.....	29
Figure 11 – Data Flow specification for data exchange between Functions	29
Figure 12 – Example of a SourceRef and ControlRef connection	33
Figure 13 – Example of open SourceRef and ControlRef	33
Figure 14 – Example of a connected SourceRef and ControlRef (source and controlled are set).....	34
Figure 15 – Example of an implemented SourceRef and ControlRef (extRefAddr and extCtrlAddr are set)	35
Figure 16 – SubscriberLNode and ControllingLNode definition example.....	36
Figure 17 – SubscriberLNode and ControllingLNode selection example	36
Figure 18 – SubscriberLNode and ControllingLNode resolution example.....	36
Figure 19 – Example of service specification within a SourceRef element.....	38
Figure 20 – Example of service specification within a SubscriberLN element	39
Figure 21 – Example of a GooseParameters specification.....	43
Figure 22 – Example for referencing a GooseParameters	43
Figure 23 – Specification of a binary Wired oriented connection	46
Figure 24 – Specification of a binary Wired oriented connection (visual representation).....	46
Figure 25 – Implementation of the LPDI/LPDO.....	47
Figure 26 – Example of BinaryWiringParameters	48
Figure 27 – Example of Wired Input and Output specification for XCBB.....	49
Figure 28 – Example of the implementation of the XCBB wiring specification.....	50
Figure 29 – Specification of an analogue Wired oriented connection.....	51
Figure 30 – Specification of an analogue Wired oriented connection (visual representation)	51
Figure 31 – Implementation of an analogue Wired oriented connection specification.....	52
Figure 32 – Example of AnalogueWiringParameters.....	53
Figure 33 – Example of Control Model specification	55

Figure 34 – Example of PTOC Setting Groups specification	56
Figure 35 – Example of array values specification	57
Figure 36 – Example LNodeSpecNaming	59
Figure 37 – Application Template definition with ProcessResource	61
Figure 38 – Application instance with ProcessResource resolution	62
Figure 39 – CB interlocking equation	63
Figure 40 – Application template	63
Figure 41 – Example Application with ProcessResource	64
Figure 42 – Using ProcessResource for SourceRef parameterization	65
Figure 43 – ProcessResource resolution to set SourceRef source	65
Figure 44 – Using ProcessResource with SubscriberLNode	66
Figure 45 – ProcessResource resolution with SubscriberLNode	67
Figure 46 – Example of ProcessResource usage for CBR usage	69
Figure 47 – Example of ProcessResource usage for CT usage	70
Figure 48 – Function and SubFunctions related to the Process Section	71
Figure 49 – 1 1/2 breaker control and protection application	72
Figure 50 – SCL support for Function classification (example)	75
Figure 51 – Example of Function Classification in SCL	76
Figure 52 – Example of Allocation roles with PIU	78
Figure 53 – Example of Allocation roles without Bay Controller CB Interface	79
Figure 54 – Allocation variant use case	80
Figure 55 – Allocation Variant use case representation in XML	81
Figure 56 – Auto recloser multiple allocation example	82
Figure 57 – Variables in the Process Section	83
Figure 58 – Example of variable to manage XCBR prefix	83
Figure 59 – Example of variable to manage specification of functional name	83
Figure 60 – Example of variable to manage DA value	84
Figure 61 – Example of Variable setting directly the Circuit Breaker prefix	86
Figure 62 – Example of Variable value set by an XPath expression.	87
Figure 63 – Example of Variables used for Setting Group definition	87
Figure 64 – Behavior description in a Bay	89
Figure 65 – Behavior description location	89
Figure 66 – Example of BehaviorDescription in a single LNode	93
Figure 67 – Example of floating BehaviorDescription	94
Figure 68 – Example P21 BehaviorDescription	95
Figure 69 – Example of ProcessEcho for XCBR.Pos transmission	97
Figure 70 – Example of ProcessEcho for measurement transmission	98
Figure 71 – FSD usage in specification process	100
Figure 72 – SSD Template	101
Figure 73 – IED Allocation	102
Figure 74 – Function Structure mapped to S-IEDs	102
Figure 75 – Process IID workflow	112
Figure 76 – Process ICD with ISD workflow	113

Figure 77 – Process ICD without ISD workflow	113
Figure 78 – Process ICD with ISD from SSD template workflow	113
Figure 79 – BehaviorDescription implementation documentation	114
Figure 80 – Multiple LNodes instantiation by one LN	115
Figure 81 – specification of binary inputs function	116
Figure 82 – Process ICD content with mapping documentation	117
Figure 83 – Single LNode implemented by multiple LN	118
Figure 84 – SourceRef implementation in same LN documentation	119
Figure 85 – SourceRef implementation in a GGIO documentation	120
Figure 86 – SourceRef implementation in a TCTR documentation	120
Figure 87 – Example of SourceRef mapping to real IED	121
Figure 88 – Example of real IED used to implement SourceRef	122
Figure 89 – Concept of mapping SourceRef to ExtRef	123
Figure 90 – SourceRef definition based on DO	124
Figure 91 – Using granularity for better SourceRef creation	124
Figure 92 – SourceRef definition for same DO at DA level	125
Figure 93 – SourceRef definition at DO level for reporting communication	125
Figure 94 – 1 to 1 implementation of SourceRef	126
Figure 95 – Using intAddr for mapping SourceRef to ExtRef	127
Figure 96 – Match documentation between ExtRef and SourceRef	127
Figure 97 – Choosing position ExtRef as mapping of SourceRef	128
Figure 98 – Example of same intAddr	129
Figure 99 – Using extRefAddr for SMV mapping	129
Figure 100 – Use of extCtrlAddr example	130
Figure 101 – Deviating DO/DA mapping documentation	131
Figure 102 – SED exchange	131
Figure 103 – Engineering rights rules from IEC 61850-6:2009+AMD2:2024	132
Figure 104 – SCC/SED concept	132
Figure 105 – SCC concept	133
Figure 106 – project UUID	134
Figure 107 – SCC workflow example	139
Figure 108 – use of UUIDs to handle SED flows	141
Figure 109 – use of UUIDs to handle SCC flows	142
Figure 110 – Handling of minRequestSCDFileVersion/Revision example	143
Figure 111 – Combining SCC and SED workflows	144
Figure 112 – Example of exchange between main/fork project and other system	145
Figure 113 – Combined example SCC/SED	146
Figure 114 – Use of SCC for extension engineering	147
Figure 115 – Single line of project process example	148
Figure 116 – Project execution flow	148
Figure 117 – interaction between main and for projects	149
Figure 118 – Use of SCC for exchange between main and fork project	149
Figure 119 – example of project flow between engineering and commissioning	150

Figure 120 – Example of SCC process.....	150
Figure 121 – Response of a process ICD to a system specification or IED specification template	151
Figure 122 – Response of a process IID to a project SCD.....	151
Figure 123 – Response of a process IID to an ISD/SSD.....	152
Figure 124 – Response of a process ICD to an SSD with allocation roles	152
Figure 125 – Global overview.....	153
Figure 126 – Reference to FSD.....	154
Figure 127 – Reference to ASD	155
Figure 128 – Use of references.....	155
Figure 129 – UUID example 1	159
Figure 130 – UUID example 2.....	159
Figure 131 – UUID example 3.....	160
Figure 132 – Scenario 1.....	160
Figure 133 – Zoom on ASD.....	161
Figure 134 – Subscenario 1	162
Figure 135 – Zoom on SSD Template	163
Figure 136 – Subscenario 2	163
Figure 137 – Zoom on ISD.....	164
Figure 138 – Subscenario 3.....	164
Figure 139 – Zoom on SCD.....	165
Figure 140 – Subscenario 4	165
Figure 141 – Scenario 2.....	166
Figure 142 – Scenario 3.....	166
https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025	
Table 1 – Reference between published versions of the standard and related namespace name.....	15
Table 2 – Attributes of the IEC 61850-6-100:2019B9 XML namespace.....	15
Table 3 – Attributes of the IEC 61850-6-100:2019C1 XML namespace.....	16
Table 4 – Attributes of the IEC/TR 61850-90-30 SSD example.....	16
Table 5 – Conditions for presence of attributes within a context	27
Table 6 – Attributes of the SourceRef element	30
Table 7 – Management of the ExtRef with SourceRef	31
Table 8 – Attributes of the ControlRef element.....	31
Table 9 – Attributes of SubscriberLNode	37
Table 10 – Attributes of ControllingLNode.....	37
Table 11 – SpecServiceType	38
Table 12 – Attributes of the L2CommParameter element	41
Table 13 – Attributes of the L3IPv4CommParameter element.....	41
Table 14 – Attributes of the L3IPv6CommParameter element.....	42
Table 15 – Attributes of the GooseParameters element	42
Table 16 – Attributes of the SMVParameters element	44
Table 17 – Attributes of the ReportParameters element	44
Table 18 – Attributes of the LogParameters element.....	45

Table 19 – Attributes of the BinaryWiringParameters element.....	48
Table 20 – Attributes of the AnalogueWiringParameters element.....	52
Table 21 – DOS element attributes.....	54
Table 22 – SDS element attributes.....	54
Table 23 – DAS element attributes.....	54
Table 24 – LNodeSpecNaming element attributes.....	59
Table 25 – Attributes of the ProcessResource element.....	68
Table 26 – Attributes of the Resource element.....	68
Table 27 – Attributes of the PowerSystemRelation element.....	73
Table 28 – Attributes of the FunctionRef element.....	74
Table 29 – Attributes of the FunctionCatRef element.....	74
Table 30 – Attributes of the FunctionCategory and SubCategory element.....	75
Table 31 – Attributes of the AllocationRole element.....	77
Table 32 – Attributes of the Variable element.....	84
Table 33 – Attributes of the VariableApplyTo element.....	85
Table 34 – Attributes of the BehaviorDescription element.....	90
Table 35 – isSpecification and isSimulation attributes usage.....	90
Table 36 – Attributes of the BehaviorReference element.....	90
Table 37 – Attributes of the InputVar element.....	92
Table 38 – Attributes of the OutputVar element.....	92
Table 39 – Attributes of the ProcessEcho element.....	96
Table 40 – Attributes of the FunctionTemplate and SubFunctionTemplate element.....	100
Table 41 – ISD file content.....	104
Table 42 – Process ICD file content.....	108
Table 43 – Process IID file content.....	110
Table 44 – Attributes of the Project element.....	134
Table 45 – Attributes of the ProjectProcessReference element.....	134
Table 46 – Attributes of the CheckoutID element.....	135
Table 47 – Rules for SCC scenarios.....	137
Table 48 – Rules for SED scenarios.....	140
Table B.1 – Service section of ISD File.....	170

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMUNICATION NETWORKS AND SYSTEMS FOR
POWER UTILITY AUTOMATION –

Part 90-30: IEC 61850 Function Modelling in SCL

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC TR 61850 has been prepared by subcommittee 10: Guidelines for IEC 61850 Function Modelling in SCL, of IEC technical committee TC 57: WG10. It is a Technical Report.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
57/2693/DTR	57/2734/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 61850 series, published under the general title *Communication networks and systems for power utility automation*, can be found on the IEC website.

NOTE The following print types are used:

- *SCL attributes and elements: in italic type.*

This IEC technical report includes Code Components i.e. components that are intended to be directly processed by a computer. Such content is any text found between the markers <CODE BEGINS> and <CODE ENDS>, or otherwise is clearly labelled in this standard as a Code Component.

The purchase of this IEC technical report carries a copyright license for the purchaser to sell software containing Code Components from this standard to end users either directly or via distributors, subject to IEC software licensing conditions, which can be found at: <http://www.iec.ch/CCv1>.

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

- reconfirmed,
- withdrawn, or
- revised.

ITEH Standards
(<https://standards.iteh.ai>)
Document Preview

[IEC TR 61850-90-30:2025](https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025)

<https://standards.iteh.ai/catalog/standards/iec/f29bbfb7-38a9-40ec-8122-8cab433356ad/iec-tr-61850-90-30-2025>