

The IROL Standard Drafting Team thanks all commenters who submitted comments on the seventh draft of the IROL Standards. The drafting team extends its thanks and gratitude to the commenters. This has been a complex effort for the industry. Your comments have added clarity and improved the consistency of the output of this team. The set of standards addressed includes the following:

- IRO-007-1 — Monitoring the Reliability Coordinator Wide Area
- IRO-008-1 — Reliability Coordinator Operational Analyses and Real-time Assessments
- IRO-009-1 — Reliability Coordinator Actions to Operate Within IROLs
- IRO-010-1 — Reliability Coordinator Data Specification and Collection

These standards were posted for a 45-day public comment period from January 2 through February 15, 2007. The IROL Standard Drafting Team (IROL SDT) and the Compliance Elements Drafting Team (CEDT) working on this set of standards asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 15 sets of comments, including comments from more than 59 different people from more than 39 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

The IROL SDT and the CEDT working on this set of standards considered the comments submitted, and made the following conforming changes:

- IRO-008-1 — Reliability Coordinator Operational Analyses and Real-time Assessments
 - Modified the Time Horizon for R3 to include **both** Real-time Operations and Same-day Operations.
 - R3 requires the Reliability Coordinator, under certain conditions, to share the results of some of its Operational Planning Analyses and Real-Time Assessments with those entities that are expected to take those actions.
 - The Time Horizon had been 'Same Day Operations' which is defined as, 'routine actions required within the timeframe of a day, but not real-time.' The addition of the 'Real-time Operations' Time Horizon, which is defined as, 'actions required within one hour or less to preserve the reliability of the bulk electric system' is an improvement since it reflects that the Reliability Coordinator may need to act very quickly, in 'real-time' to share this information.
- IRO-009-1 — Reliability Coordinator Actions to Operate Within IROLs
 - Deleted the definitions for the two terms that are no longer used in the standards
 - Interconnection Reliability Operating Limit Event and Interconnection Reliability Operating Limit Event Duration
 - Modified the Time Horizon for R1 to include **both** Operations Planning or Same Day Operations
 - R1 requires that the Reliability Coordinator have Operating Processes, Procedures, or Plans for each IROL that is identified in advance of Real-time to prevent exceeding the IROL.
 - The Time Horizon had been 'Operations Planning' which is defined as, 'operating and resource plans from day-ahead up to and including seasonal'. The addition of the 'Same Day Operations' Time Horizon, which is defined as, 'routine actions required within the timeframe of a day, but not real-time' is an improvement since it reflects that the Reliability Coordinator may need to develop some of these action plans the same day the potential IROL is identified.

- Modified the Time Horizon for R2 to include **both** Operations Planning or Same Day Operations
 - R2 requires that the Reliability Coordinator have Operating Processes, Procedures, or Plans for each IROL that is identified in advance of Real-time to mitigate an instance of exceeding the IROL within that IROL's T_v.
 - The Time Horizon had been 'Operations Planning' which is defined as, 'operating and resource plans from day-ahead up to and including seasonal'. The addition of the 'Same Day Operations' Time Horizon, which is defined as, 'routine actions required within the timeframe of a day, but not real-time' is an improvement since it reflects that the Reliability Coordinator may need to develop some of these action plans the same day the potential IROL is identified.
- Modified the violation severity level for R1 to omit the use of percentages and to show that violation of any of these requirements is 'Severe'
- IRO-010-1
 - Modified the Violation Risk Factor for R1 and R2 from 'Medium' to 'Low'
 - R1 and R2 require the Reliability Coordinator to have and distribute a specification for the reliability-related data it needs and a failure to accomplish these tasks wouldn't necessarily have an impact on the bulk electric system and are more appropriately labeled as 'Low'.
 - Corrected the perceived gaps in the percentages used for violation severity levels by adding the phrase, 'greater than or equal to' so that rather than saying '95% to 99%' the revised language says, 'greater than or equal to 95% but less than 100%'.
- IRO-005-3
 - Modified R12 by deleting the parenthetical reference to SOL to clarify that the Reliability Coordinator is not assigned primary responsibility for responding to SOLs. R12 now states:
 - Each Reliability Coordinator who foresees a transmission problem (such as an ~~SOL~~ IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay.

Based on the comments received and the conforming changes made based on those comments, the drafting team is recommending that the Standards Committee authorize moving the standards forward to ballot.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

<http://www.nerc.com/~filez/standards/Relay-Loadability.html>

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at

609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Consideration of Comments on Draft 7 of the IROL Standards

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Commenter	Organization	Industry Segment									
		1	2	3	4	5	6	7	8	9	10
1. Anita Lee (G1)	AESO		X								
2. Ken Goldsmith (G7)	ALT	x									
3. Jason Shaver	ATC	x									
4. Dave Rudolph (G7)	BEPC										
5. Brent Kingsford (G1)	CAISO		X								
6. Ed Thompson (G2)	ConEdison	X									
7. Peter Yost (G2)	ConEdison	x									
8. Ed Davis	Entergy	x									
9. Steve Myers (G1)	ERCOT		X								
10. David Folk	First Energy Corp	x		x		x	x				
11. Dick Pursley (G7)	GRE										
12. David Kiguel (G2)	Hydro One	X									
13. Roger Champagne (G2) (I)	Hydro-Québec TransÉnergie	x									
14. Ron Falsetti (G1) (I) (G2)	IESO		X								
15. Kathleen Goodman (G2) (I)	ISO-NE		x								
16. Matt Goldberg (G1)	ISO-NE		X								
17. Jim Cyrulewski (G3)	JDRJC Associates								x		
18. Eric Ruskamp (G7)	LES										
19. Don Nelson (G2)	MA Dept of Energy and Tele									X	
20. Robert Coish (I) (G7)	Manitoba Hydro	x		x		x	x				
21. Tom Mielnik (G7)	MEC										
22. Jason Marshall (G3)	Midwest ISO		x								
23. Bill Phillips (G1)	MISO		X								
24. Terry Bilke (G7)	MISO		x								
25. Carol Gerou (G7)	MP										

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Commenter	Organization	Industry Segment									
		1	2	3	4	5	6	7	8	9	10
26. Joe Knight (G7)	MRO										x
27. Murale Gopinathan (G2)	Northeast Utilities	x									
28. Guy Zito (G2)	NPCC										x
29. James Harwell (G2)	NPCC										x
30. John Mosier (G2)	NPCC										x
31. Alan Boesch (G7)	NPPD	x									
32. Jerad Barnhart (G2)	NStar	X									
33. Greg Campoli (G2)	NYISO		x								
34. Mike Calimano (G1)	NYISO		X								
35. Ralph Rufrano (G2)	NYPA	x									
36. Al Adamson (G2)	NYSRC		x								
37. Todd Gosnell (G7)	OPPD										
38. Richard Kafka	Pepco Holdings, Inc.	x									
39. Alicia Daugherty (G1)	PJM		X								
40. C. Robert Moseley (G5)	Public Service Commission of South Carolina									x	
41. David A. Wright (G5)	Public Service Commission of South Carolina									x	
42. Elizabeth B. Fleming (G5)	Public Service Commission of South Carolina									x	
43. G. O'Neal Hamilton (G5)	Public Service Commission of South Carolina									x	
44. John E. Howard (G5)	Public Service Commission of South Carolina									x	
45. Mignon L. Clyburn (G5)	Public Service Commission of South Carolina									x	
46. Phil Riley (G5)	Public Service Commission of South Carolina									x	
47. Randy Mitchell (G5)	Public Service Commission of South Carolina									x	
48. Jim Busbin (G6)	Southern Co. Transmission	x									
49. Jim Griffith (G6)	Southern Co. Transmission	x									
50. JT Wood (G6)	Southern Co. Transmission	x									
51. Marc Butts (G6)	Southern Co. Transmission	x									
52. Roman Carter (G6)	Southern Co. Transmission	x									
53. Dean Robinson (G4)	TVA	x									
54. Mark Creech (G4)	TVA	x									
55. Stuart Goza (G4)	TVA	x									
56. Sue Mangum-Goins	TVA	x									

Consideration of Comments on Draft 7 of the IROL Standards

Commenter	Organization	Industry Segment									
		1	2	3	4	5	6	7	8	9	10
(G4)											
57. Jim Haigh (G7)	WAPA										
58. Neal Balu (G7)	WPS										x
59. Pam Oreschnick (G7)	XEL										

I – Indicates that individual comments were submitted in addition to comments submitted as part of a group

G1 - IRC Standards Review Committee

G2 – NPCC CP9 Reliability Standards Working Group (NPCC CP9)

G3 – Midwest ISO Stakeholders Standards Collaboration Participants (MISO SSC)

G4 – TVA

G5 – Public Service Commission of SC (PSC of SC)

G6 – Southern Company Transmission (Southern Co)

G7 – MRO

Index to Questions, Comments and Responses:

1. The drafting team consolidated the requirements for IRO-010— Reliability Coordinator Data Specification and Collection and IRO-011— Providing Data to the Reliability Coordinator into a single standard to eliminate the cross-reference between the two standards. Do you agree with consolidating the requirements into a single standard? If not, please explain. 9

2. The drafting team consolidated the requirements for IRO-009 — Reliability Coordinator Actions to Operate within IROLs and IRO-012— Procedures, Processes or Plans for Preventing and Mitigating IROLs into a single standard to eliminate the cross-reference between the two standards. Do you agree with consolidating the requirements into a single standard? If not, please explain..... 10

3. The drafting team recommends moving the requirements from IRO-013 —Reliability Coordinator Directives Relative to IROLs into the project that will address communication protocols so that all requirements related to directives will be comprehensively addressed under the single Project 2007-02 – Operating Personnel Communication Protocols. Do you agree with moving the requirements from IRO-013 into Project 2007-02? If not, please explain..... 12

4. The drafting team is proposing that all standards and conforming changes become effective the first day of the first quarter, three months after regulatory approvals. Do you agree that the proposed effective date will give entities time to become fully compliant? If not, please explain. 15

5. The Drafting Team added a Violation Risk Factor for each requirement. Do you agree with the Violation Risk Factor for each requirement in the proposed standards? If not, please identify any requirement with a violation risk factor you feel is incorrect. 17

6. The Drafting Team added a Mitigation Time Horizon for each requirement. Do you agree with the Mitigation Time Horizon for each requirement in the proposed standards? If not, please identify any requirement with a time horizon you feel is incorrect..... 21

7. The latest version of the Reliability Standards Development Procedure Manual requires that each standard include ‘violation severity levels’ rather than ‘levels of non-compliance’. ‘Violation severity levels’ identify how badly an entity violated each requirement, and are not linked to the reliability-related impact of violating a requirement. (The reliability-related impact of violating a requirement is now identified in the ‘Violation Risk Factor’ appended to each requirement.) Note that these severity levels are ‘guidelines’ and variations from the above categories are acceptable. 25

Do you agree with the Violation Severity Levels for each of the proposed standards? If you disagree with any of the Violation Severity Levels for the proposed standards, please identify the standard and requirement you feel has an incorrect Violation Severity Level. 25

8. The implementation plan modifies several requirements in already approved standards because compliance with those requirements does not seem practical. Every facility in the Transmission Operator’s area has a System Operating Limit, but the Reliability Coordinator isn’t required to see all these limits and may not have information to determine the cause of instances of exceeding these limits – yet there are requirements that hold the Reliability Coordinator accountable for identifying the cause of any actual or potential SOL. The drafting team reviewed these requirements and made proposed modifications to limit the Reliability Coordinator’s accountability for real-time actions relative to SOLs. Do you agree with 29

9. The Drafting Team is recommending that when IRO-007-1 is approved, conforming changes be made to the following standards: 34

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IRO-005-2 — RC – Current Day Operations; Retire R1; Convert R1.1 into a Reference; Modify R13 part 2 34

TOP-006-1 — Monitoring System Conditions Voltage and Reactive Control; Modify R2 34

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Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.	34
10. The Drafting Team is recommending that when IRO-008-1 is approved, conforming changes be made to the following standard:	40
IRO-004-1 — RC – Operations Planning; Retire R1 and R2.....	40
Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.	40
11. The Drafting Team is recommending that when IRO-009-1 is approved, conforming changes be made to the following standards:	42
EOP-001-0 — Emergency Operations Planning; Retire R2	42
IRO-004-1 — RC – Operations Planning; Retire R3 and R6.....	42
IRO-005-2 — RC – Current Day Operations; Retire R3, R5, R9; Delete R13 part 1; Modify R14; Retire R16, R17	42
Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.	42
12. The Drafting Team is recommending that when IRO-010-1 is approved, conforming changes be made to the following standards:	51
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IRO-004-1 — RC – Operations Planning; Retire R4, R5.....	51
IRO-005-2 — RC – Current Day Operations; Retire R2	51
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TOP-006-1 — Monitoring System Conditions Voltage and Reactive Control; Modify R4	51
Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.	51
13. If you are aware of any conflicts between the proposed standard and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement please identify the conflict here. Similarly, if you believe that any requirement in this set of standards has an unnecessary adverse impact on energy markets, please identify the requirement and its adverse impact here.	54
14. The drafting team is recommending that these standards be balloted with four separate ballots, according to the following table. There would be a single ballot for IRO-007-1 that would include approval of IRO-007-1 and approval of the retirement of IRO-002-1 R6, and approval of retirement of IRO-003-2 R1 and R2, etc.	55
15. If you have any other comments on this set of standards or its implementation plan that you have not already submitted above, please provide them here.	57

1. The drafting team consolidated the requirements for IRO-010— Reliability Coordinator Data Specification and Collection and IRO-011— Providing Data to the Reliability Coordinator into a single standard to eliminate the cross-reference between the two standards. Do you agree with consolidating the requirements into a single standard? If not, please explain.

Summary Consideration: All commenters agreed with consolidating the requirements in IRO-010 and IRO-011.

Question #1			
Commenter	Yes	No	Comment
MRO	x		This is a step in the right direction, and the revised IRO-010-1 captures the relevant information related to data collection as reflected in R1.1, R1.3, R1.4, R3. A fewer number of standards to deal with is always better.
ATC	x		ATC agrees with the decision to combine standards IRO-010 and IRO-011 into a single standard.
IRC Standards Review Committee	x		
Entergy	x		
Southern Co	x		
Manitoba Hydro	x		
PSC of SC	x		
Pepco Holdings, Inc.	x		
IESO	x		
First Energy Corp	x		
NPCC CP9	x		
ISO-NE	x		
Hydro-Québec TransÉnergie	x		
MISO SSC	x		
TVA	x		

2. The drafting team consolidated the requirements for IRO-009 — Reliability Coordinator Actions to Operate within IROLs and IRO-012— Procedures, Processes or Plans for Preventing and Mitigating IROLs into a single standard to eliminate the cross-reference between the two standards. Do you agree with consolidating the requirements into a single standard? If not, please explain.

Summary Consideration: All commenters agreed with consolidating the requirements in IRO-009 and IRO-012.

Question #2			
Commenter	Yes	No	Comment
MRO	x		While the description of requirements captures the essence of preventing and mitigating IROLs, it would be helpful for clarity to change the title of the revised IRO-009-1 to Reliability Coordinator actions to operate within IROLs and plans to prevent/mitigate IROLs.
Response: The drafting team struggled with the exact title necessary for this standard, but in the end felt that keeping the current as posted title will better assist the industry in comprehending the scope of the requirements. The development of plans is one of the Reliability Coordinator’s actions to operate within IROLs.			
Manitoba Hydro	x		MH endorses the MRO comments: While the description of requirements captures the essence of preventing and mitigating IROLs, it would be helpful for clarity to change the title of the revised IRO-009-1 to Reliability Coordinator actions to operate within IROLs and plans to prevent/mitigate IROLs.
Response: The drafting team struggled with the exact title necessary for this standard, but in the end felt that keeping the current as posted title will better assist the industry in comprehending the scope of the requirements. The development of plans is one of the Reliability Coordinator’s actions to operate within IROLs.			
ATC	x		ATC agrees with the decision to combine standards IRO-009 and IRO-012 into a single standard.
Entergy	x		
Southern Co	x		
PSC of SC	x		
TVA	x		
IRC Standards Review Committee	x		
Pepco Holdings, Inc.	x		
IESO	x		
First Energy Corp	x		
NPCC CP9	x		

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Question #2			
Commenter	Yes	No	Comment
ISO-NE	x		
Hydro-Québec TransÉnergie	x		
MISO SSC	x		

3. The drafting team recommends moving the requirements from IRO-013 —Reliability Coordinator Directives Relative to IROLs into the project that will address communication protocols so that all requirements related to directives will be comprehensively addressed under the single Project 2007-02 – Operating Personnel Communication Protocols. Do you agree with moving the requirements from IRO-013 into Project 2007-02? If not, please explain.

Summary Consideration: Several commenters indicated that the description of Project 2007-02 should have been posted for review with the comment form. A full description of the Reliability Standards Work Plan 2007-2009 can be downloaded from the following site: ftp://www.nerc.com/pub/sys/all_updl/standards/sar/FERC_Filing_Volumes_I-III-III_Reliability_Standards_Development_Plan_30Nov06.pdf

The work plan includes a description of the project that will address communications protocols. The brief description (see page 114 of the work plan) of Project 2007-02 states:

This is a new project that was identified in support of a blackout recommendation #26. This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers.

Question #3			
Commenter	Yes	No	Comment
MRO		x	Project 2007-02 should have been included with this package for us to consider. The MRO is also concerned that there is a general trend to develop too many requirements and measures, which would become administratively burdensome to the ERO and the entities that must comply.
Response: Agreed. The project is described in the Long-range Plan for Development of Standards. The intent of the Operating Personnel Communication Protocols project is to eliminate redundant requirements, and to define a set of communication protocols for real-time use to improve situational awareness and reduce response time.			
MISO SSC		x	The project in question should have been posted with the package. The quality of responses to this item will likely be impaired as many will not have reviewed the intent of the plan. We agree that clear communications are important and should be part of an operators overall training program. We have some concern about developing measures for the sake of having measures, particularly when they appear to require significant administration to track.
Response: Agreed. The project is described in the Long-range Plan for Development of Standards.			

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Question #3			
Commenter	Yes	No	Comment
Southern Co		x	It appears that R1 of IRO-013 would be more appropriately contained in the IRO standards. R1 of IRO-013 states: The BA, IA, and TOP shall each follow its RC's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances the BA, IA or TOP shall immediately inform the RC of its inability to perform the directive so that the RC can implement alternate remedial actions. The directives covered by this requirement shall be those that: R1.1. Prevent instances of exceeding interconnection reliability operating limits (IROLs). R1.2. Mitigate the magnitude and duration of instances of exceeding IROLs.
Response: Standard IRO-001-1 Requirement 8 has a requirement that mandates that Transmission Operators, Balancing Authorities, Generator Operators Transmission Service Providers Load-serving Entities and Purchasing-selling Entities comply with Reliability Coordinator directives. Including the requirement in both standards would be redundant.			
Manitoba Hydro		x	MH endorses MRO comments: Project 2007-02 should have been included with this package for us to consider. The MRO is also concerned that there is a general trend to develop too many requirements and measures, which would become administratively burdensome to the ERO and the entities that must comply.
Response: Agreed. The project is described in the Long-range Plan for Development of Standards.			
TVA		x	Since IRO-013 is not approved, then IRO-004-1 R7 should not be deleted until replaced. The redlined IRO-004-2 shows the entire standard to be retired.
Response: Standard IRO-001-1 Requirement 8 has a requirement that mandates that Transmission Operators, Balancing Authorities, Generator Operators Transmission Service Providers Load-serving Entities and Purchasing-selling Entities comply with Reliability Coordinator directives. This requirement does not have any limits on the time frame within which the Reliability Coordinator's directives must be followed – therefore IRO-004 R7 is redundant. Good observation.			
PSC of SC	x		
Entergy	x		
IRC Standards Review Committee	x		
Pepco Holdings, Inc.	x		
IESO	x		
First Energy Corp	x		
NPCC CP9	x		
ISO-NE	x		

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Question #3			
Commenter	Yes	No	Comment
Hydro-Québec TransÉnergie	x		

4. The drafting team is proposing that all standards and conforming changes become effective the first day of the first quarter, three months after regulatory approvals. Do you agree that the proposed effective date will give entities time to become fully compliant? If not, please explain.

Summary Consideration: Most commenters supported the proposed effective dates and these were not changed.

Question #4			
Commenter	Yes	No	Comment
MRO		x	It is difficult to prescribe one time window such as, three months after regulatory approvals. Different Standards might require different implementation times to allow the responsible entities to become fully compliant. For example, for those Standards that require equipment installation, it would take more than 3 months to satisfy the compliance requirements. Moreover, the Standards drafting team is the appropriate body to stipulate how much time is needed after regulatory approvals to become compliant.
Response: The three month window was proposed specifically for this set of standards by the drafting team – each drafting team proposes a unique implementation plan. This set of standards does not require any equipment installation.			
ATC		x	ATC believes that all standards and conforming changes should become effective the first day of the first quarter, six months after regulatory approvals.
Response: Some requirements in some other standards may require the acquisition and installation of equipment that isn't feasible in a six month time period.			
Southern Co		x	Does regulatory approvals only include FERC or does it also include the NERC Board? A standard approved by the NERC Board, for example, on September 30 th would be implemented on January 1, which is too soon to prepare for. It might also be too soon even if it meant only FERC, since the NERC Board could approve September 29 th followed by FERC approval on September 30 th . In these instances, 6 months might be more appropriate.
Response: The NERC Board is not a regulatory agency, however only standards that have been approved by their ballot pool and by the NERC Board will be submitted to FERC and Canadian regulatory authorities. If a standard were approved by the NERC Board on September 30 th , the standard would be submitted to FERC and the Canadian regulatory authorities within a couple weeks (by mid October), and FERC and the Canadian regulatory authorities would take about 2 or 3 months to determine whether to approve the standards (by mid Jan)– and then the standard would become effective on the first calendar day of the first quarter 3 months after that – (the first day of the first quarter 3 months after mid Jan would be July 1). So – with the proposed implementation plan, the standards wouldn't become enforceable for almost a year after being approved by their Ballot Pool.			

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Question #4			
Commenter	Yes	No	Comment
MISO SSC		x	Since the drafting team is not yet formed and has not seen the final product, it is premature to set a short implementation date.
<p>Response: We assume your comment is in response to the nomination form that was posted asking for additional members of the IROL Standard Drafting Team. This set of standards has been developed by the existing IROL Standard Drafting Team that has been in place for several years. While there was a posting asking for nominations for the IROL Standard Drafting Team, the posting was 'adding' members to the existing drafting team, not to develop a totally new drafting team.</p>			
Manitoba Hydro		x	MH endorses MRO comments: It is difficult to prescribe one time window such as, three months after regulatory approvals. Different Standards might require different implementation times to allow the responsible entities to become fully compliant. For example, for those Standards that require equipment installation, it would take more than 3 months to satisfy the compliance requirements. Moreover, the Standards drafting team is the appropriate body to stipulate how much time is needed after regulatory approvals to become compliant.
<p>Response: The three month window was proposed specifically for this set of standards by the drafting team – each drafting team proposes a unique implementation plan. This set of standards does not require any equipment installation.</p>			
PSC of SC	x		
Entergy	x		
TVA	x		
IRC Standards Review Committee	x		
Pepco Holdings, Inc.	x		
IESO	x		
First Energy Corp	x		
NPCC CP9	x		
ISO-NE	x		
Hydro-Québec TransÉnergie	x		

5. The Drafting Team added a Violation Risk Factor for each requirement. Do you agree with the Violation Risk Factor for each requirement in the proposed standards? If not, please identify any requirement with a violation risk factor you feel is incorrect.

Summary Consideration: While most of the Violation Risk Factors were acceptable to most commenters, the drafting team did modify violation risk factor associated with IRO-010-1 R2. None of the other proposed changes were supported by the drafting team because they did not match the definitions provided for distinguishing between High, Medium and Lower Violation Risk Factors.

Question #5			
Commenter	Yes	No	Comment
MRO		x	For many requirements, the VRFs are overstated. ERO has not given correct directives on how to assign VRFs. In addition, one cannot assign a single VRF for a requirement such as IRO-008-1 R3 that covers both Operational Planning Analysis, and real time assessment. In such instances, IRO -008-1 R3 should be split into two separate requirements, one dealing with Operational Planning Analysis, for which the VRF would be Medium and the other, addressing real time assessment for which the VRF would be High. For IRO-007-1 R2, the VRF should be Medium since not adopting the most conservative value for IROL or its Tv would not result in cascading outages. For IRO-010-1 Requirement R2, the VRF should be Low since it is an administrative item, and all that is needed is that the RC receives the status information.
<p>Response: Under the current, in-effect version of the Reliability Standards Development Procedure, drafting teams are assigned the responsibility of developing Violation Risk Factors using the definitions of High Medium and Lower Violation Risk Factors that were provided in the manual. The intent of IRO-008-1 R3 is to share the results – and the reliability-related impact to the interconnection is the same whether the results are from the Real-Time Assessment or the Operational Planning Analysis. This requirement doesn't concern taking actions to mitigate or prevent exceeding an IROL. Most commenters agreed with the rating for IRO-007-1 R2. The failure to respect what may be the accurate value of IROL or the IROL Tv could result in exceeding an IROL and the definition of an IROL is: A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System. The High rating is correct. The rating for IRO-010 R2 was modified to 'Lower' as suggested.</p>			
Southern Co	x	x	Since the VRFs are being addressed through other ballots or procedures, and by the fact that this standard drafting team has no control over the VRFs, this question may be of no value to Industry.
<p>Response: Under the current, in-effect version of the Reliability Standards Development Procedure, drafting teams are</p>			

Consideration of Comments on Draft 7 of the IROL Standards

Question #5			
Commenter	Yes	No	Comment
assigned the responsibility of developing Violation Risk Factors as the standard is developed. Until the process is formally modified, drafting teams will develop these VRFs and will collect stakeholder feedback on those VRFs.			
IRC Standards Review Committee NPCC CP9 ISO-NE Hydro-Québec TransÉnergie		x	(i) We agree with the VRFs for IRO-008, IRO-009 and IRO-010. (ii) For IRO-007, the VRF for R1 should be HIGH. Real-time monitoring of system conditions to determine if system parameters are within IROLs is critical to ensuring interconnected system reliability. Lack of or insufficient monitoring would expose a system to unreliable operation.
Response: Making the distinction between High and Medium is a challenge – however failure to monitor does not, in and of itself, cause bulk power system instability, separation, or a cascading sequence of failures. Flows in excess of limits and voltages outside limits can cause bulk power system instability, separation, or a cascading sequence of failures. Monitoring does not preclude the requirement to assess the system to determine whether you have a stable system. The drafting team agrees that monitoring is of ‘high’ importance – but the VRFs are based on impact to the interconnected system, not on the importance of the activity. Monitoring is a supporting task that is essential to operating within IROLs – but the most critical requirements in this set are the requirements that address preventing or mitigating instances of exceeding IROLs.			
IESO		x	(i) We agree with the VRFs for IRO-008 and -010. (ii) For IRO-007, the VRF for R1 should be HIGH. Real-time monitoring of system conditions to determine if system parameters are within IROLs is critical to ensuring interconnected system reliability. Lack of or insufficient monitoring would expose a system to potential unreliable operation. (iii) For IRO-009, the VRFs for R1 and R2 should both be HIGH. The absence of pre-determined control actions that need to be made available to operation personnel to prevent and mitigate IROL violation can result in failure to maintain interconnected system reliability. Operating personnel may be faced with having insufficient or no control actions to correct an IROL violation, which can lead to cascade tripping or instability. We believe this comment is consistent with our interpretation of the HIGH risk factor requirement definition (b), above.
Response: Making the distinction between High and Medium is a challenge – however failure to monitor does not, in and of itself, cause bulk power system instability, separation, or a cascading sequence of failures. Flows in excess of limits and voltages outside limits can cause bulk power system instability, separation, or a cascading sequence of failures. Monitoring does not preclude the requirement to assess the system to determine whether you have a stable system. The drafting team agrees that monitoring is of ‘high’ importance – but the VRFs are based on impact to the interconnected system, not on the importance of			

Consideration of Comments on Draft 7 of the IROL Standards

Question #5													
Commenter	Yes	No	Comment										
<p>the activity. Monitoring is a supporting task that is essential to operating within IROLs – but the most critical requirements in this set are the requirements that address preventing or mitigating instances of exceeding IROLs.</p> <p>Having action plans is important – but failure to have an action plan does not, in and of itself, cause bulk power system instability, separation, or a cascading sequence of failures.</p>													
MISO SSC		x	<p>We strongly disagree with the violation severity levels of attribute (yes/no go/no-go) requirements being arbitrarily placed in the Severe category. This places late reports in the same category as failure to correct an IROL. We don't treat jaywalking the same as grand theft. The sanctions matrix needs to be changed to have another level for attribute requirements. The sanctions need to be based on impact to reliability.</p> <p>We also disagree with the default approach to assigning severity levels to scalable standards (only 5% in the Low area, 70% of observations in the Severe category). This is the equivalent as applying the following highway speeding rules to cars that have a typical top end of 100MPH:</p> <table border="0"> <tr> <td>65 MPH or less</td> <td>Pass</td> </tr> <tr> <td>66 MPH</td> <td>Low</td> </tr> <tr> <td>67-69 MPH</td> <td>Moderate</td> </tr> <tr> <td>70-74 MPH</td> <td>High</td> </tr> <tr> <td>75-100 MPH or higher</td> <td>Severe</td> </tr> </table> <p>Scalable standards should be assigned severity levels that approach quartiles of the observed or expected range of performance.</p> <p>This approach to assigning violation severity levels to attribute and scalable requirements doesn't appear to have been presented for official comment in any stakeholder forum.</p>	65 MPH or less	Pass	66 MPH	Low	67-69 MPH	Moderate	70-74 MPH	High	75-100 MPH or higher	Severe
65 MPH or less	Pass												
66 MPH	Low												
67-69 MPH	Moderate												
70-74 MPH	High												
75-100 MPH or higher	Severe												
<p>Response: We will share your recommendations with the Standards Committee but making changes to these guidelines is outside the control of the drafting team.</p> <p>The drafting team put great deliberation into the proposed VRFs.</p> <p>Violation Severity Levels are not the same as Violation Risk Factors. Violation Severity Levels measure the degree to which the entity 'missed' full compliance and is not a measure of the associated risk to reliability. Violation Risk Factors assess the reliability-related impact of violating a requirement.</p>													
Manitoba Hydro		x	<p>MH endorses MRO comments: It is difficult to prescribe one time window such as, three months after regulatory approvals. Different Standards might require different implementation times to allow the responsible entities to become fully compliant. For example, for those Standards that require equipment installation, it would take more than 3 months to satisfy the compliance requirements. Moreover, the Standards</p>										

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Question #5			
Commenter	Yes	No	Comment
			drafting team is the appropriate body to stipulate how much time is needed after regulatory approvals to become compliant.
Response: These comments appear to be in response to question 4 and were addressed there.			
Entergy		x	<p>IRO-008-1 R3 has two conditions: one the results of an Operational Planning Analysis, and one the results of a Real-Time Assessment. The Violation Risk Factor should be different for each of these two conditions. The VRF for the results of an Operational Planning Analysis should be MEDIUM, while the VRF for the results of a Real-Time Assessment should be HIGH.</p> <p>IRO-010-1 R1 requires the development of a documented specification for data and information while R2 requires distribution of that specification. Both R1 and R2 have VRFs of Medium. We suggest these two requirements be changed to LOWER. The development and distribution of a data specification is not a High or Medium risk factor.</p>
Response: The intent of IRO-009-1 R3 is to share the results – and the reliability-related impact to the interconnection is the same whether the results are from the Real-Time Assessment or the Operational Planning Analysis. This requirement doesn't concern taking actions to mitigate or prevent exceeding an IROL.			
For IRO-010-1 R2, the drafting team deliberated between Medium and Low and changed the rating to Low as you suggested.			
First Energy Corp	x		
TVA	x		
PSC of SC	x		

6. The Drafting Team added a Mitigation Time Horizon for each requirement. Do you agree with the Mitigation Time Horizon for each requirement in the proposed standards? If not, please identify any requirement with a time horizon you feel is incorrect.

Summary Consideration: Many commenters indicated a lack of familiarity with 'mitigation time horizons'. These were introduced in the ERO Rules of Procedure as one of the elements used to determine the size of a sanction. Requirements that must be mitigated in real-time operations would have a larger sanction than those that could be mitigated over a longer time period. The comment form provided a list of possible mitigation time horizons. The latest version of the Reliability Standards Development Procedure did not include mitigation time horizons – this was an omission in bringing the manual into conformance with the latest ERO Rules of Procedure and this omission should be corrected with the next (normal) revision to the manual. In the meantime, stakeholders will be asked to comment on and approve time horizons as they are developed with standards. The alternative is to have these time horizons identified outside the standard development process, and stakeholders indicated they wanted a voice in the selection of all the compliance elements within standards. *(Note that the term, 'mitigation time horizons' was modified by the Standards Committee and is now called, 'time horizons'.)*

Most commenters supported the proposed time horizons. However, based on stakeholder comments the drafting team did modify three of the time horizons:

- IRO-008-1 R3 was revised to include both Real-time Operations and Same-day Operations
- IRO-009-1 R1 was revised to include both Operations Planning or Same Day Operations
- IRO-009-1 R2 was revised to include both Operations Planning or Same Day Operations

Question #6			
Commenter	Yes	No	Comment
MRO Manitoba Hydro		x	<p>Mitigation Time Horizons are described near the top of this comment form.</p> <p>The description of the Mitigation Time Horizons states: The ERO Rules of Procedure include the use of mitigation time horizons as one element used to determine the size of sanctions.</p> <p>Can the drafting team inform the Registered Ballot Body where the ERO definition of Mitigation Time Horizons can be found along with documentation describing how the mitigation time horizons will be used in determining penalties. Mitigation Time Horizons are not listed as a Performance Element of a Reliability Standard in the Reliability Standards Development Procedure Version 6 adopted by the NERC BOT on November 1, 2006. As such, it does not seem appropriate to include them in any Reliability Standards.</p> <p>The comment form description of Mitigation Time Horizons further states The drafting</p>

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Question #6			
Commenter	Yes	No	Comment
			<p>team used the following guidelines in developing mitigation time horizons for each requirement, whereas the final statement in the description of the Violation Risk Factors states The following categories of violation risk factors were approved with the latest version of the Reliability Standards Development Procedure. Like the Violation Risk Factors, the categories of Mitigation Time Horizons should also be approved and incorporated into the Reliability Standards Development Procedure in order to ensure that the definitions are consistent for all NERC Reliability Standards.</p> <p>The MRO cannot vote to approve a standard that includes Mitigation Time Horizons until the drafting team can produce ERO documented definitions and the documented manner in which the Mitigation Time Horizons will be used to determine penalties.</p>
<p>Response: Time horizons were introduced in the ERO Rules of Procedure (Sanctions Guidelines) as one of the elements used to determine the size of a sanction. Requirements that must be mitigated in real-time operations would have a larger sanction than those that could be mitigated over a longer time period. The comment form provided a list of possible mitigation time horizons. The latest version of the Reliability Standards Development Procedure did not include mitigation time horizons – this was an omission in bringing the manual into conformance with the latest ERO Rules of Procedure and this omission should be corrected with the next (normal) revision to the manual. In the meantime, stakeholders will be asked to comment on and approve time horizons as they are developed with standards. The alternative is to have these time horizons identified outside the standard development process, and stakeholders indicated they wanted a voice in the selection of all the compliance elements within standards. The drafting team is obligated to use the definitions for time horizons that were posted with the comment form.</p>			
Southern Co		x	<p>The time horizon of Operations Planning related to Mitigation Time Horizons (day-ahead up to and including seasonal) is different from the time horizon used in the definition of IRO-008-1 Operational Planning Analysis (which is the next day's operation and up to 12 months ahead). Additionally, some utilities interpret Operations Planning as real time up to day ahead studies. This creates confusion with the term Operations Planning and Southern seeks clarification for the term.</p> <p>Secondly, since each requirement's time horizon appears to be contemplated within the standard itself and reflected in the assignment of the Violation Risk Factor and Violation Severity Level, Southern believes including this characteristic in the penalty adjustment process is not necessary. Therefore, we believe the Mitigation Time Horizons should NOT be a penalty adjustment factor in determining monetary penalties for non compliance.</p>
<p>Response: The drafting team is obligated to use the definitions for time horizons that were posted with the comment form. The time horizons are part of the ERO Rules of Procedure (Sanctions Guidelines) and the drafting team cannot change these.</p>			

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Question #6			
Commenter	Yes	No	Comment
Entergy		x	<p>IRO-008-1 R3 has two conditions: one the results of an Operational Planning Analysis, and one the results of a Real-Time Assessment. The Mitigation Time Horizon should be different for each of these two conditions. The MTH for the results of an Operational Planning Analysis should be Operations Planning, while the MTH for the results of a Real-Time Assessment should be Real-Time Operations.</p> <p>IRO-010-1 R1 requires the development of a documented specification for data and information while R2 requires distribution of that specification. Both R1 and R2 have MTHs of Operations Planning. We suggest these two requirements be changed to Long-term Planning. The development and distribution of a specification should be developed and distributed long before it is needed.</p>
<p>Response: The drafting team adopted your suggestion as a technical improvement to the time horizons – the information is shared as you suggest in two different time horizons.</p> <p>For IRO-010-1 R1: The time horizon is the time frame in which a violation could be corrected – and the operations planning horizon is the correct time frame for R1. The data and information are expected to be used within a year of receipt.</p>			
IRC Standards Review Committee Pepco Holdings, Inc. IESO NPCC CP9 ISO-NE Hydro-Québec TransÉnergie		x	<p>(i) We agree with the mitigation time horizons for IRO-007, -008 and -010.</p> <p>(ii) For IRO-009, however, R1 and R2 should also be assigned a Same Day Operation time horizon since "identified in advance of real time" may include day at hand assessments.</p>
<p>Response: The drafting team modified the time horizons of IRO-009-1 R2 and R3 to include both same day and operations planning as suggested.</p>			
MISO SSC		x	<p>The meaning of Operations Assessment needs to be clarified. There is no indication of the relative impacts the drafting team considered for each mitigation time horizon. I would assume that a violation of a standard in the Real-Time Operations horizon would be considered worst than a violation in the Operations Planning Horizon. If this is the case, the standard needs to specify this. How does the team see Operations Assessment horizon fitting in?</p>
<p>Response: The 'operations assessment' time horizon is looking at the 'post operations' time frame. The drafting team looked at each requirement and tried to identify the timeframe available to mitigate a violation. According</p>			

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Question #6			
Commenter	Yes	No	Comment
			to the sanctions guidelines, the violation of a requirement with a real-time operations horizon would be subject to a larger fine than the violation of a requirement with an operations planning horizon. The ERO Rules of Procedure include information on how sanctions will be calculated.
First Energy Corp	x		
TVA	x		
PSC of SC	x		

- 7. The latest version of the Reliability Standards Development Procedure Manual requires that each standard include ‘violation severity levels’ rather than ‘levels of non-compliance’. ‘Violation severity levels’ identify how badly an entity violated each requirement, and are not linked to the reliability-related impact of violating a requirement. (The reliability-related impact of violating a requirement is now identified in the ‘Violation Risk Factor’ appended to each requirement.) Note that these severity levels are ‘guidelines’ and variations from the above categories are acceptable.

Do you agree with the Violation Severity Levels for each of the proposed standards? If you disagree with any of the Violation Severity Levels for the proposed standards, please identify the standard and requirement you feel has an incorrect Violation Severity Level.

Summary Consideration: (This question was asked by the Compliance Elements Drafting Team (CEDT) and the responses were provided by the CEDT)

Many of the commenters agreed that the use of a percentage of how many identified IROLs had Operating Processes, Procedures, or Plans to prevent or mitigate the IROL seemed inappropriate when determining how severe a violation was. The drafting teams also agree there is no justifiable reason for a known IROL not to have Operating Processes, Procedures, or Plans to prevent or mitigate the IROL. Based on this, IRO-009 was modified so that if a Reliability Coordinator has any identified IROLs that do not have Operating Processes, Procedures, or Plans to prevent or mitigate the IROL, it will be a severe violation. Some commenters were concerned about the measurability of the term, ‘without delay’ and the CEDT modified the violation severity levels to allow some short period of time between the recognition that an IROL has been exceeded (an alarm) and the time that the Reliability Coordinator either takes a control action or issues a directive to others. As revised, if the Reliability Coordinator does not either take a control action or issue a directive 5 minutes after exceeding an IROL, that is a Severe violation. The 5 minutes is not intended as a ‘grace period’ in which the Reliability Coordinator can delay taking any action – the 5 minutes recognizes that the Reliability Coordinator may need a couple of minutes to collect data, and the data collection doesn’t necessarily result in actions that can be independently confirmed. Analyzing data from dynamic wall board displays, exchanging verbal information, scanning screen displays are typical methods of collecting data to assess the situation before taking a control action but don’t result in log entries or voice recordings that can be measured.

In addition, IRO-010 was modified to remove a perceived “gap” in the percentage ranges.

Question #7			
Commenter	Yes	No	Comment
MRO		x	The way the Violation Severity levels are spelled out, it again appears to be arbitrary cut offs, and especially the High and Severe Violation Severity Levels have to be tightly defined so that the entities would know what actions to take to be compliant.
Response: IRO-009 was modified to remove the percentage cutoffs. In addition, IRO-010 was modified to eliminate a			

Consideration of Comments on Draft 7 of the IROL Standards

Question #7			
Commenter	Yes	No	Comment
perceived "gap" in the percentage range. The percentages attempt to identify lower level violations up to severe level violations according to how much the entity missed the requirement.			
Entergy			The VSLs in IRO-009 and IRO-010 have gaps between the low end of LOW (e.g. 95%) and the high end of MODERATE (e.g. 94%) with a similar gap in other VSLs. Why is there this gap? If the argument is that the ranges are whole numbers then it may be OK. However, it seems there should not be a gap and we suggest closing those gaps by writing the VSL with - greater than and equal to - and - less than - specifications.
Response: IRO-009 was modified to remove the percentages. IRO-010 was modified to close the gaps with greater than and equal to – and – less than – specifications per your suggestion			
Southern Co		x	Let's say a Reliability Coordinator (RC) who performs admirably throughout the year has only one identifiable IROL for the year. However, due to one reason or another, the RC does not have a procedure in advance that identifies actions to prevent the instance from exceeding the IROL. This results in a SEVERE violation level. Now, let's say a RC who does less than an admirable job throughout the year and has multiple (50) identifiable IROLs for the year. This RC is allowed approximately 8 instances of not having a procedure which identified actions to prevent exceeding the IROL, and this RC only achieves a MODERATE violation level. There needs to be some type of rewarding mitigation factor for those RCs who have very few identifiable IROLs.
Response: Agreed – every instance of failure to fully meet these requirements is severe. There is no acceptable justification for identifying a limit that could cause instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection and not having a plan to either prevent or mitigate the IROL.			
Manitoba Hydro		x	endorses the MRO comments: The way the Violation Severity levels are spelled out, it again appears to be arbitrary cut offs, and especially the High and Severe Violation Severity Levels have to be tightly defined so that the entities would know what actions to take to be compliant.
Response: IRO-009 was modified to remove the percentage cutoffs. In addition, IRO-010 was modified to eliminate a perceived "gap" in the percentage range. The percentages attempt to identify lower level violations up to severe level violations according to how much the entity missed the requirement.			
ATC		x	Many of the requirements need to be clarified before we can determine the appropriateness of the violation severity levels. See our comments under question 15.

Question #7			
Commenter	Yes	No	Comment
<p>Response: The Compliance Elements Drafting Team believes the severity levels are correct as modified and do support the requirements.</p>			
<p>IRC Standards Review Committee Pepco Holdings, Inc. IESO NPCC CP9 ISO-NE Hydro-Québec TransÉnergie</p>		x	<p>(i) We agree with the violation severity levels for IRO-007 and IRO-008.</p> <p>(ii) For IRO-009, the violation level is subject to interpretation. For example, "Between 95% to 99% of the IROLs identified in advance of real-time have Operating Processes, Procedures, or Plans that identify actions to prevent or mitigate instances of exceeding those IROLs." Does the 95% to 99% range apply to the number of IROLs identified, or to the total time that any IROLs are identified? In other words, is it the percentage of time that for all IROLs identified, there are Operating Processes, Procedures, or Plans that identify actions to prevent or mitigate instances of exceeding any IROLs?</p> <p>To put the violation severity level in a more proper context, the SDT may want to consider putting the range in a "negative sense", i.e., the percentage of time that the requirements are not met, whichever the base of the above interpreted measurements turn out to be.</p> <p>Better still, we suggest the SDT consider adopting violation severity levels based on the number of times that R1 or R2 is not met, i.e. the number of times that, for any IROLs that are identified in advance of real-time, there lacks operating processes, procedures, or plans that identify actions to prevent or mitigate instances of exceeding these IROLs. This way, assessment of violations can be made much more easily. Further, the severity level will be independent of the total number of IROLs identified, which can eliminate the skewed assessment due to a small of number of IROLs identified in an RC area. For example, under the as written % assessment structure, an RC could be found 0% compliant (and hence assessed a severe violation level) for just one incident of not meeting R1 or R2 if it had only one IROL identified.</p> <p>(iii) For IRO-010, we agree with the measures as they are based on numbers, not a combination of number and duration. However, the same comment on "negative context" as provided for IRO-009 also apply here. In other words, we suggest turning the % meeting requirements to % failing to meet requirements (hence violation).</p>
<p>Response: (i) Thank you (ii) IRO-009 was modified to remove the percentages. (iii) IRO-010 was modified to close the gaps with greater than and equal to – and – less than – specifications, but kept the original percentages.</p>			

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Question #7			
Commenter	Yes	No	Comment
First Energy Corp		x	IRO-009-1 Violation Severity Level 2.3.2 should read as follows "... delay of 5 minutes or greater before acting or directing ..."
<p>Response: The Compliance Elements Drafting Team (CEDT) agrees that a time needs to be spelled out for delay, and also agrees that some time needs to be given so that the Reliability Coordinator can think through the plan and ensure that the actions they are implementing are correct and will not cause other issues in the system. However, this timeframe for delay can not be open ended lest someone try and claim that a failure to act until three hours had passed was simply a delay, and not a failure to take action. The CEDT believes that a 5 minute upper limit is appropriate in this case and has modified the standard accordingly.</p>			
MISO SSC		x	The compliance percentage leaves gaps from 94-95% and from 84-85%. What is the justification for these percentages?
<p>Response: IRO-009 was modified to remove the percentages. IRO-010 was modified to close the gaps with greater than and equal to – and – less than – specifications.</p>			
TVA	x		
PSC of SC	x		

8. The implementation plan modifies several requirements in already approved standards because compliance with those requirements does not seem practical. Every facility in the Transmission Operator’s area has a System Operating Limit, but the Reliability Coordinator isn’t required to see all these limits and may not have information to determine the cause of instances of exceeding these limits – yet there are requirements that hold the Reliability Coordinator accountable for identifying the cause of any actual or potential SOL. The drafting team reviewed these requirements and made proposed modifications to limit the Reliability Coordinator’s accountability for real-time actions relative to SOLs. Do you agree with the drafting team’s approach?

Summary Consideration: While several commenters disagree with this change, most of the comments provided indicate a misunderstanding of the intent of the proposed change. The intent of the change is not to remove the Reliability Coordinator’s accountability for responding to any SOLs but to clearly identify that the **primary** responsibility for resolving SOLs rests with the Transmission Operator. The Reliability Coordinator does not monitor all facilities in its area that are subject to SOLs, but the Reliability Coordinator does monitor some of the facilities within each Transmission Operator’s area. The Reliability Coordinator is expected to monitor the SOLs associated with facilities that are within each Transmission Operator’s area that have been identified as potentially becoming IROLs. If a Reliability Coordinator has data that shows there is an operating problem, the Reliability Coordinator is not obligated **under these standards** to take action – however the Reliability Coordinator’s obligation **under all conditions** is to take action to preserve the reliability of the interconnection.

Based on stakeholder comments, the drafting team did modify IRO-005-3 R12 by deleting the parenthetical reference to SOL.

Question #8			
Commenter	Yes	No	Comment
Entergy		x	We agree that the RC should not be held responsible to identify the cause of any actual or potential SOL for which he is not monitoring the information. However, if he is monitoring the parameters associated with a SOL he does have an obligation to act on that information and should be held accountable. Therefore, a blanket reprieve for not acting on known information is not acceptable.
<p>Response: There is a Transmission Operator with responsibility for every SOL and the Transmission Operator is accountable for acting to resolve its SOLs. If a Reliability Coordinator has data that shows there is a problem, the Reliability Coordinator is not obligated under these standards to take action – however the Reliability Coordinator’s obligation is to take action to preserve the reliability of the interconnection.</p>			
Southern Co		x	One can never tell when an SOL will turn into an IROL. In fact, there may be several SOLs occurring at the same time which may turn into an IROL. What the drafting team is recommending in this standard is for the RC to no longer monitor or study SOLs even though NERC standards currently require them to. This seems contradictory to NERC’s goal of maintaining a reliable BES.

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Question #8			
Commenter	Yes	No	Comment
			<p>Also, there are contradictory statements throughout the standard which require the RC to coordinate and communicate SOLs to the TSPs. However, according to the changes recommended in this standard, the RC will no longer be required to monitor SOLs. One such occurrence is in IRO-005-3, in which R11 states the RC shall make known to the TSPs in its wide-area view all SOLs and IROLs. How does the drafting team expect the RCs to make the TSPs aware of all SOLs when the RC is not expected to monitor or study the SOLs?</p> <p>Southern Co. Transmission recommends that the RC continue to monitor and study SOLs as the current standards require. The August 2003 Blackout resulted, in part, from the RCs not monitoring and studying SOLs within its wide-area view. To move away from this concept will make the BES more vulnerable to a possible future blackouts.</p>
<p>Response: There is a Transmission Operator with responsibility for every SOL and the Transmission Operator is accountable for acting to resolve its SOLs. The Reliability Coordinator isn't required to monitor all facilities within each Transmission Operator's area that has an SOL. The Reliability Coordinator does monitor some but not all of the facilities within each Transmission Operator's area. The Reliability Coordinator is expected to monitor the SOLs associated with facilities that are within each Transmission Operator's area that have been identified as potentially becoming IROLs.</p> <p>Under FAC-014, the Reliability Coordinator is obligated to ensure that SOLs are developed according to the Reliability Coordinator's SOL Development Methodology. Under most cases, the Transmission Operator develops the SOLs and submits them to the Reliability Coordinator and then the Reliability Coordinator submits the applicable SOLs (and IROLs) to the Transmission Service Provider.</p>			
ATC		x	<p>ATC does not agree with the proposed modifications to existing NERC standards. It's our opinion that Reliability Coordinators should monitor both SOLs and IROLs within their area. The Reliability Coordinators provide an additional level of system oversight that ensures the reliable operations of the bulk power system. A strict interpretation by Reliability Coordinators would lead them to only monitor pre-determined IROLs and they would be unable to determine if an SOL becomes an IROL in real-time.</p> <p>ATC does not believe that the proposed changes to existing standards have anything to do with these standards. The proposed standards are not replacing the requirements in the existing standards but are only adding on new requirements that address IROLs. The SDT is overstepping the spirit of the IROL SAR and seems to be adjusting existing standards for some unexplained reason. If the SDT believes that these changes are appropriate then they should sponsor a SAR and allow for full industry participation.</p> <p>It's our opinion that the propose changes to existing standards will leave that bulk power</p>

Consideration of Comments on Draft 7 of the IROL Standards

Question #8			
Commenter	Yes	No	Comment
			<p>system in a less reliable state, and we ask that the SDT abandon this effort and move the proposed changes to a SAR. Once in a SAR the industry will be able to better exam the effects of the changes.</p> <p>Lastly ATC believes that changes in monitoring of SOL may impact the ability of Reliability Coordinators to call TLRs. If they are not required to monitor SOLs then identification will be the sole responsibility of Transmission Operators with no confirmation from RCs before a TLR is started.</p>
<p>Response: There is a Transmission Operator with responsibility for every SOL and the Transmission Operator is accountable for acting to resolve its SOLs. The Reliability Coordinator isn't required to monitor all facilities within each Transmission Operator's area that has an SOL. The Reliability Coordinator does monitor some but not all of the facilities within each Transmission Operator's area. The Reliability Coordinator is expected to monitor the SOLs associated with facilities that are within each Transmission Operator's area that have been identified as potentially becoming IROLs. Nothing in these standards precludes the Reliability Coordinator from calling a TLR.</p>			
TVA		x	<p>FAC-011-1 R1 (which is effective 10/01/2007) requires the Reliability Coordinator to have a documented methodology for use in developing SOLs within its Reliability Coordinator Area.</p> <p>TOP-007-0 R4 requires the Reliability Coordinator to evaluate actions taken to resolve SOL violation, and if the actions taken are not appropriate or sufficient, direct actions required to return the system to within limits.</p> <p>Existing IRO-002-1 R5 and R8 (which still exist in the proposed IRO-002-2 as R4 and R6) require the Reliability Coordinator to have detailed real-time monitoring to ensure that potential or actual SOL violations are identified. These requirements require the Reliability Coordinator to be aware of all SOLs.</p> <p>We agree with the concept to clarify the accountabilities between the Transmission Operator and the Reliability Coordinator for real-time actions relative to SOLs, but it is inaccurate to state that the Reliability Coordinator is not required to see all SOLs. The Transmission Operator should be pro-active in mitigating SOL violations (real-time and calculated first contingency), in coordination with the Reliability Coordinator. The Reliability Coordinator must be aware of all SOL violations in order to direct action when needed to do so.</p>
<p>Response: Although FAC-011-1 does require the Reliability Coordinator to have a methodology for developing SOLs, FAC-014-1 does not require the Reliability Coordinator to develop SOLs – FAC-014-1 R1 requires the Reliability Coordinator to 'ensure that SOLs, including Interconnection Reliability Operating Limits (IROLs), for its Reliability Coordinator Area are established and that the SOLs (including Interconnection Reliability Operating Limits) are consistent with its SOL</p>			

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Question #8			
Commenter	Yes	No	Comment
<p>Methodology. '</p> <p>TOP-007-0 R4 is referring to the SOLs identified in TOP-007-0 R1 which are identified by the Transmission Operator. TOP-007 R1 states, "R1. A Transmission Operator shall inform its Reliability Coordinator when an IROL or SOL has been exceeded and the actions being taken to return the system to within limits."</p> <p>TOP-007 R4 states, "R4. The Reliability Coordinator shall evaluate actions taken to address an IROL or SOL violation and, if the actions taken are not appropriate or sufficient, direct actions required to return the system to within limits."</p> <p>The drafting team did recommend in its implementation plan that IRO-002-1 R4 and R6 be retired to eliminate the confusion associated with assigning the same requirement to different functional entities.</p> <p>There is a Transmission Operator with responsibility for every SOL and the Transmission Operator is accountable for acting to resolve its SOLs. The Reliability Coordinator isn't required to monitor all facilities within each Transmission Operator's area that has an SOL. The Reliability Coordinator does monitor some but not all of the facilities within each Transmission Operator's area. The Reliability Coordinator is expected to monitor the SOLs associated with facilities that are within each Transmission Operator's area that have been identified as potentially having IROLs.</p> <p>Under TOP-007-0 R1, the Reliability Coordinator should be informed of actions the Transmission Operator has taken in response to exceeding its SOLs.</p>			
Manitoba Hydro	X		However, the drafting team should ensure that where the RC's accountability has been limited or removed regarding real-time actions relative to SOLs, the accountability of the appropriate entity, e.g. transmission operator is covered by or added to another standard. This will ensure no reliability gaps are created.
<p>Response: The drafting team left in place the Transmission Operator's requirements for responding to SOLs to ensure that there is a clear accountability for resolving SOLs.</p>			
IRC Standards Review Committee Pepco Holdings, Inc. ISO-NE Hydro-Québec TransÉnergie NPCC CP9	X		There are a number of requirements in the posted IRO-005-3 that still hold the RC responsible for being aware of and directing actions when a SOL is being approached or violated. The drafting team's proposed approach would require that corresponding changes be made to IRO-005-3.
<p>Response: The drafting team found 4 instances in the subject standard where a requirement still references an 'SOL' in</p>			

Consideration of Comments on Draft 7 of the IROL Standards

Question #8			
Commenter	Yes	No	Comment
<p>association with a Reliability Coordinator. For R6 – the requirement is for the Reliability Coordinator to coordinate with the Transmission Operator to resolve the SOL. For R9 – the objective of the requirement is clear, but the wording needs modification. The revision is outside the scope of the SAR assigned to this drafting team. Modifications to IRO-005 are included in the draft SAR for Reliability Coordination. For R11- the Reliability Coordinator gives SOLs to the Transmission Service Provider. As envisioned, these are SOLs that the Reliability Coordinator receives from the Transmission Operator. This supports the same responsibilities for distribution of SOLs as required in FAC-014. For R12, the drafting team modified the parenthetical to omit the reference to SOL. This supports your suggestion.</p>			
IESO	x		<p>There are a number of requirements in the posted IRO-005-3 that still hold the RC responsible for being aware of and directing actions when a SOL is being approached or violated. The drafting team's proposed approach would require that corresponding changes be made to IRO-005-3.</p> <p>On the other hand, we feel that while the RC is not required to monitor these SOLs, they need to continue to be provided the information on the results of SOL determination and assessment as currently stipulated in R11 of TOP-002-2 since SOLs may become IROLs under certain conditions as determined by the RC.</p>
<p>Response: The drafting team found 4 instances in the subject standard where a requirement still references an 'SOL' in association with a Reliability Coordinator. For R6 – the requirement is for the Reliability Coordinator to coordinate with the Transmission Operator to resolve the SOL. For R9 – the objective of the requirement is clear, but the wording needs modification. The revision is outside the scope of the SAR assigned to this drafting team. Modifications to IRO-005 are included in the draft SAR for Reliability Coordination. For R11- the Reliability Coordinator gives SOLs to the Transmission Service Provider. As envisioned, these are SOLs that the Reliability Coordinator receives from the Transmission Operator. This supports the same responsibilities for distribution of SOLs as required in FAC-014. For R12, the drafting team modified the parenthetical to omit the reference to SOL. This supports your suggestion. The drafting team also agrees with your last statement.</p>			
First Energy Corp	x		
MISO SSC	x		
PSC of SC	x		
MRO	x		

9. The Drafting Team is recommending that when IRO-007-1 is approved, conforming changes be made to the following standards:
 IRO-002-1 — RC – Facilities; Retire R6
 IRO-003-2 — RC – Wide Area View; Retire R1 and R2
 IRO-005-2 — RC – Current Day Operations; Retire R1; Convert R1.1 into a Reference; Modify R13 part 2
 TOP-006-1 — Monitoring System Conditions Voltage and Reactive Control; Modify R2
 Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.

Summary Consideration: While many commenters did indicate support for these changes, several other commenters indicated they don't support these changes and a variety of reasons were provided. The drafting team is hopeful that the explanations provided will improve consensus on this issue.

Question #9			
Commenter	Yes	No	Comment
MRO		x	The MRO agrees with the SDT in striking the first part of IRO-005-2 since it is already covered in FAC-014-R5.1. However, the MRO does not agree with the proposed revision to the second part that states: The Transmission Service Providers shall respect SOLs and IROLs in accordance with filed tariffs..... Since the RC may not know all SOLs and IROLs, it is not possible for the RC to make the TSP aware of what the RC itself does not know. The MRO recommends the SDT amend the proposed revision to state: The Transmission Service Provider shall respect all KNOWN SOLs and IROLs in accordance with.....
Response: Note that the proposed revision is outside the scope of work assigned to this drafting team. The drafting team can only make conforming changes to standards that are needed to support the work done with the new set of standards.			
Entergy		x	IRO-007-1 R1 contains the requirement that the RC - ... perform Real-Time Monitoring of system operating parameters ... Given the propensity of industry participants to re-interpret meanings to their own interpretation, we strongly suggest the term CONTINUOUS be added to the requirement so R1 would read - ... perform CONTINUOUS Real-Time Monitoring of system operating parameters ... We believe there should be a minimum set of information required to be monitored by the Reliability Coordinator and that minimum set should be specified in the standards. This version, V7, of these IRO standards would remove all specification of any

Question #9			
Commenter	Yes	No	Comment
			<p>parameters to be monitored by the RC and place a list of some information in a Technical Reference. In addition, it is our understanding that Technical References and information contained in those References are not mandatory on the industry. The reason given for not including the list in the standard is "The list of parameters to monitor (IRO-005-2 R1.1 through R1.10) does not identify all parameters to monitor and can be misleading." The wording in IRO-005-2 R1 contains the phrase INCLUDING BUT NOT LIMITED TO THE FOLLOWING. A person must have some objective in mind other than conforming to the standard if he claims to not understand the meaning of, or can be misled by, the phrase INCLUDING BUT NOT LIMITED TO THE FOLLOWING.</p> <p>Therefore, we suggest deleting the Technical Reference and adding the following list and common English usage phrases back into the standards at the end of IRO-007-1 R1:</p> <p>THOSE SYSTEM OPERATING PARAMETERS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:</p> <p>R1.1 Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading.</p> <p>R1.2 Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.</p> <p>R1.3 Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.</p> <p>R1.4 System real and reactive reserves (actual versus required).</p> <p>R1.5 Capacity and energy adequacy conditions.</p> <p>R1.6 Current ACE for all its Balancing Authorities.</p> <p>R1.7 Current local or Transmission Loading Relief procedures in effect.</p> <p>R1.8 Planned generation dispatches.</p> <p>R1.9 Planned transmission or generation outages.</p> <p>R1.10 Contingency events.</p>

Consideration of Comments on Draft 7 of the IROL Standards

Question #9			
Commenter	Yes	No	Comment
<p>Response:</p> <p>The drafting team assumes that you are concerned that there be a person at a console that is monitoring system conditions. There are other requirements in other standards that require 24/7 staffing of the real-time system operating position with a certified system operator.</p> <p>Most stakeholders seemed to support moving the list of possible elements to a technical reference.</p>			
Southern Co		x	<p>Southern Co. believes that the RC should monitor BES elements that could result in SOLs and IROLs. We believe the RC should know the current status of critical facilities whose failure could result in an SOL and IROL.</p> <p>Therefore, we recommend keeping all the requirements being recommended for retirement.</p>
<p>Response: The requirement in IRO-007-1 for the Reliability Coordinator to monitor parameters says:</p> <ul style="list-style-type: none"> - The Reliability Coordinator shall perform Real-Time Monitoring of system operating parameters within its Wide Area to determine if operating parameters are within their associated Interconnection Reliability Operating Limits (IROLs). <p>There is a Transmission Operator with responsibility for every SOL and the Transmission Operator is accountable for acting to resolve its SOLs. The Reliability Coordinator isn't required to monitor all facilities within each Transmission Operator's area that has an SOL. The Reliability Coordinator is expected to monitor parameters associated with facilities that have been identified as potentially having IROLs.</p>			
Manitoba Hydro		x	<p>If we are removing the monitoring of SOL from the RC's responsibility how can IRO-005-0 R11 be true. The RC can not make known to Transmission Service Providers all SOLs. This Requirement needs to be edited. Possibly along the lines of:</p> <p>R11. Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, all IROLs and known SOLs within its wide-area view. The Transmission Service Providers shall respect IROLs and all known SOLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.</p> <p>Also, MH endorses the MRO comments: The MRO agrees with the SDT in striking the first part of IRO-005-2 since it is already covered in FAC-014-R5.1. However, the MRO does not agree with the proposed revision to the second part that states: The Transmission Service Providers shall respect SOLs and IROLs in accordance with filed tariffs..... Since the RC may not know all SOLs and IROLs, it is not possible for the RC to make the TSP aware of what the RC itself does not know. The MRO recommends the SDT amend the proposed revision to state: The Transmission Service Provider shall respect all KNOWN</p>

Consideration of Comments on Draft 7 of the IROL Standards

Question #9			
Commenter	Yes	No	Comment
			SOLs and IROLs in accordance with.....
<p>Response: The proposed changes do not remove the Reliability Coordinator’s responsibility for monitoring system parameters that lead to all SOLs – we are removing the RC as the entity with primary responsibility for monitoring parameters that lead to SOLs. The Reliability Coordinator isn’t required to monitor all facilities that could have an SOL. The Reliability Coordinator is expected to monitor parameters associated with facilities that have been identified as potentially having IROLs.</p> <p>Under FAC-014, the Reliability Coordinator is obligated to ensure that SOLs are developed according to the Reliability Coordinator’s SOL Development Methodology. Under most cases, the Transmission Operator develops the SOLs and submits them to the Reliability Coordinator and then the Reliability Coordinator submits the applicable SOLs (and IROLs) to the Transmission Service Provider.</p> <p>The drafting team can only make conforming changes to the standards that are related to the work of the SAR assigned to this drafting team.</p>			
ATC		x	<p>IRO-007 states that Reliability Coordinators should monitor IROLs within their area.</p> <p>ATC does not believe that the changes to the four listed requirements have anything to do with IRO-007. In other words IRO-007 is not replacing the existing requirements, therefore the SDT has no authority to delete these requirements.</p> <p>It's ATC opinion that the SDT should only modify existing requirements that are in direct alignment with their work. In other words they should only alter those existing requirements that are being replaced with new requirements.</p> <p>If the SDT disagrees with ATC then they need to explain how IRO-007 is replacing the above listed requirements.</p>
<p>Response:</p> <p>The implementation plan provides an explanation of the drafting team’s justification for retiring or revising the associated requirements.</p> <ul style="list-style-type: none"> When IRO-007-1 becomes effective, IRO-002-1 R6 should be retired. <p>IRO-002-1 R6 identifies some, but not all of the parameters to be monitored by the Reliability Coordinator and can be misleading. A list of elements to be monitored (from IRO-005-2) has been converted into a Technical Reference.</p> <ul style="list-style-type: none"> When IRO-007-1 becomes effective, IRO-003-2 should be retired. <p>The Transmission Operator, not the Reliability Coordinator, is responsible for operating within System Operating Limits. The Reliability Coordinator is responsible for operating within IROLs.</p> <p>When IRO-008-1 becomes effective, IRO-005-2 R1 should be retired and R1.1 through R1.10 should be converted into a Technical Reference.</p>			

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Question #9			
Commenter	Yes	No	Comment
<p>IRO-005-2 R1 is duplicated with IRO-007-1 R1. The list of parameters to monitor (IRO-005 -2 R1.1 through R1.10) does not identify all parameters to monitor and can be misleading.</p> <ul style="list-style-type: none"> When IRO-007-1 and IRO-009-1 become effective, IRO-005-2 R13 should be retired. IRO-005 R13 has two requirements – one to direct actions to ensure SOLs and IROLs are not exceeded, and one requirement to operate to the most limiting parameter in situations where there is disagreement on a limit. The first requirement in IRO-015 R13 assumes that the Reliability Coordinator can see all System Operating Limits, and this is not always true. The Reliability Coordinator is responsible for seeing IROLs and controlling operations within its Reliability Coordinator Area so as to prevent instances of exceeding IROLs. <p>The second part of IRO-005 R13 requires entities to operate to the most limiting parameter when there is a difference in derived limits. This should be revised so that it is not applicable to the Reliability Coordinator – IRO-007-1 R2 has a similar requirement that is applicable totally to the Reliability Coordinator.</p>			
First Energy Corp		x	The revised IRO-005 requirement 10 (formerly Requirement 13) should be moved to TOP-004 Transmission Operations since it now only pertains to Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities.
<p>Response: Agreed. Moving the requirements as proposed is outside the scope of this drafting team – this should be addressed as part of the Three-year Plan for Standards Development under the Project 2007-03. ftp://www.nerc.com/pub/sys/all_updl/standards/sar/FERC_Filing_Volumes_I-II-III_Reliability_Standards_Development_Plan_30Nov06.pdf</p>			
MISO SSC		x	Requirement R11 in Standard IRO-005-3 contradicts question 8 in the comment form. It requires the RCs to notify TPs of "SOLs and IROLs within its wide-area view". Question 8 recognizes that RCs may not have all the information for SOLs so how can they be held accountable to communicate it? This requirement needs to be eliminated.
<p>Response: Under FAC-014, the Reliability Coordinator is obligated to ensure that SOLs are developed according to the Reliability Coordinator's SOL Development Methodology. Under most cases, the Transmission Operator develops the SOLs and submits them to the Reliability Coordinator and then the Reliability Coordinator submits the applicable SOLs (and IROLs) to the Transmission Service Provider. Question 8 indicated that the Reliability Coordinator may not have all the information to 'see' all the SOLs.</p>			
TVA	x		See comment in # 8,
<p>Response: Please see the response to your comment under question #8.</p>			
IRC Standards Review Committee	x		
PSC of SC	x		
Peppo Holdings, Inc.	x		
IESO	x		

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Question #9			
Commenter	Yes	No	Comment
NPC CP9	x		
ISO-NE	x		
Hydro-Québec TransÉnergie	x		

10. The Drafting Team is recommending that when IRO-008-1 is approved, conforming changes be made to the following standard:
 IRO-004-1 — RC – Operations Planning; Retire R1 and R2

Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.

Summary Consideration: Most commenters agreed with the drafting team’s proposed retirement of IRO-004-1 R1 and R2.

Question #10			
Commenter	Yes	No	Comment
Southern Co		x	Southern Co. believes the RC should conduct contingency analysis studies that would identify SOLs and IROLs. We recommend keeping both R1 and R2.
<p>Response: The drafting team used different words to address the same requirement. The drafting team believes the proposed IRO-008-1 R1 is a better requirement because it specifically requires the Reliability Coordinator to look at its ‘Wide Area’ rather than its ‘Reliability Coordinator Area’ in conducting its Operational Planning Analyses.</p> <p>The drafting team recommended retiring IRO-004-1 R2 because it has been identified as ‘unmeasurable’ by the Missing Measures drafting team, and rather than retain it as the last remaining requirement in this standard, it should be retired when IRO-008, IRO-009, and IRO-010 become effective.</p>			
ATC		x	If Reliability Coordinators only have to monitor IROLs then they will have no ability to identify a SOL that becomes an IROL is real-time. It is the responsibility of the Reliability Coordinators to provide oversight of the bulk power system, therefore insuring reliable operations.
<p>Response: The proposed standards and implementation plan limit the Reliability Coordinator’s requirements for monitoring to those parameters associated with facilities that have been identified as potentially having IROLs.</p>			
Manitoba Hydro		x	General agreement with the approach, however, the new definition, Operational Planning Analysis, is a very high level definition such that R1 in IRO-008 may be very difficult to measure.
<p>Response: The drafting team believes that the proposed standard’s R1 is better than the requirement it is replacing. The proposed R1 requires the Reliability Coordinator to look at a wider system and doesn’t mislead the responsible entity into thinking that the list of examples provided in the original standard’s R1 (including overloaded transmission lines and transformers, voltage and stability limits, etc.) is all-inclusive.</p>			
TVA		x	IRO-004-1 R2 should be included in the Technical Reference. The Technical Reference document should be provide (for information purposes) as part of the document package for this review of proposed requirement changes.
<p>Response: The drafting team recommended retiring IRO-004-1 R2 because it has been identified as ‘unmeasurable’ by the Missing Measures drafting team, and rather than retain it as the last remaining requirement in this standard, it should be retired when IRO-008, IRO-</p>			

Consideration of Comments on Draft 7 of the IROL Standards

Question #10			
Commenter	Yes	No	Comment
009, and IRO-010 become effective.			
IRC Standards Review Committee	X		
Entergy	X		
PSC of SC	X		
Peppo Holdings, Inc.	X		
IESO	X		
First Energy Corp	X		
NPCC CP9	X		
ISO-NE	X		
Hydro-Québec TransÉnergie	X		
MISO SSC	X		
MRO	X		

11. The Drafting Team is recommending that when IRO-009-1 is approved, conforming changes be made to the following standards:

EOP-001-0 — Emergency Operations Planning; Retire R2

IRO-004-1 — RC – Operations Planning; Retire R3 and R6

IRO-005-2 — RC – Current Day Operations; Retire R3, R5, R9; Delete R13 part 1; Modify R14; Retire R16, R17

Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.

Summary Consideration: While several commenters did indicate support for the proposed retirements and revisions, other commenters identified concerns with the proposed changes. Several commenters were concerned that a requirement that forced the Reliability Coordinator to ‘coordinate’ its plans for preventing and mitigating instances of exceeding IROLs was not included in the proposed set of IROL standards. In some cases, the Reliability Coordinator doesn’t have time to ‘coordinate’ with all the entities that may need to take action as part of a plan to prevent or mitigate an instance of exceeding an IROL. The Reliability Coordinator ‘may’ coordinate with the entities that are expected to take action but this coordination is not a requirement. The Reliability Coordinator has ultimate responsibility for having these processes, procedures and plans – not the Balancing Authority or Transmission Operator. Other commenters indicated that they thought the requirement to coordinate outages had been removed, but this is not among the proposed changes.

Some commenters indicated that because the requirements for the Reliability Coordinator to monitor all SOLs have been proposed for retirement, the Reliability Coordinator will not have access to SOLs. Under FAC-014, the Reliability Coordinator does have SOLs and does distribute them to the TSP as well as to other entities. The proposed standards clarify that the primary responsibility for taking action to resolve SOLs rests with the Transmission Operator. If the Transmission Operator needs assistance, the Transmission Operator can ask for assistance when it informs the Reliability Coordinator that it has exceeded an SOL or IROL.

The drafting team is hopeful that the explanations provided will improve consensus on this issue.

Question #11			
Commenter	Yes	No	Comment
Entergy		x	1. IRO-009-1 R1 requires the RC to develop one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take to prevent exceeding those IROLs. IRO-004-1 R3 (to be deleted) requires the RC to develop action plans – IN CONJUNCTION WITH ITS TRANSMISSION OPERATORS AND BALANCING AUTHORITIES - (IRO-004-1 R3: Each Reliability Coordinator shall, in conjunction with its

Question #11			
Commenter	Yes	No	Comment
			<p>Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs.)</p> <p>2. IRO-005-2 R16 (to be retired) requires the RC to discuss options to mitigate IROLs which also is not include in these revised draft standards.</p> <p>The reasoning given in the Implementation Plan for not requiring the RC to develop - in conjunction - the Operating Process, Procedures or Plans with TOPs and BAs is that - under some conditions the Reliability Coordinator may not have time to 'coordinate' the development of these plans with all of its Transmission Operators and Balancing Authorities -. We suggest the RC be required to coordinate the development of all Operating Process, Procedures or Plans with TOPs and BAs. Only in the rarest of instances when a sudden system change requires the RC to develop a new Operating Process, Procedure or Plan in real-time may RCs be exempt from developing these Operating Process, Procedures or Plans in conjunction with TOPs and BAs.</p> <p>3. In addition, there are several requirements on TOPs and BAs (for example see TOP-002-2, TOP-004-1 R1, TOP-008-1 R1 and R2) for them to plan and operate to meet all IROLs. The TOPs and BAs must be informed of the IROLs in order to plan and operate around them.</p> <p>4. RCs should continue to develop processes, procedures or plans in conjunction with TOPs and BAs as required in the existing IRO-004 R3, and discuss options to mitigate IROLs as required in IRO-005-2 R16. The requirement to develop in - conjunction with - should be put into IRO-009-1 R1.</p> <p>Therefore we suggest IRO-009-1 R1 be changed from - ... PLANS THAT .. - to - ... PLANS DEVELOPED IN CONJUNCTION WITH TRANSMISSION OPERATORS AND BALANCING AUTHORITIES THAT ... - .</p> <p>IRO-009-1 R2 requires the RC to develop one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take to mitigate the magnitude and duration of exceeding all IROLs. The discussion above for IRO-009-1 R1 applies here. Therefore we suggest IRO-009-1 R2 be changed from - ... PLANS THAT .. - to - ... PLANS DEVELOPED IN CONJUNCTION WITH TRANSMISSION</p>

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Question #11			
Commenter	Yes	No	Comment
			<p>OPERATORS AND BALANCING AUTHORITIES THAT ... - .</p> <p>5. IRO-005-2 R5 (to be deleted) requires the RC to identify the cause of any potential or actual IROL violations. That requirement is not in these new IROs. We suggest that requirement be added back in to IRO-009-1 R3 (addressing an assessment of actual or expected system conditions) by changing - .. shall implement one or more .. - to - .. shall IDENTIFY THE CAUSE OF ANY POTENTIAL OR ACTUAL IROL VIOLATIONS and shall implement one or more ...</p> <p>6. IRO-005-2 R5 (to be deleted) requires the RC to identify the cause of any potential or actual IROL violations. That requirement is not in these new IROs. We suggest that requirement be added back in to IRO-009-1 R4 (addressing actual system conditions) by changing - .. shall, without delay, act or direct others .. - to - .. shall, without delay, IDENTIFY THE CAUSE OF EXCEEDING AN IROL, AND SHALL act or direct others ...</p>
<p>Response:</p> <p>1. 2. In some cases, the Reliability Coordinator doesn't have time to 'coordinate' with all the entities that may need to take action as part of a plan to prevent or mitigate an instance of exceeding an IROL. The Reliability Coordinator 'may' coordinate with the entities that are expected to take action but this coordination is not a requirement.</p> <p>3. Note that FAC-014 requires the Reliability Coordinator to distribute SOLs and IROLs to the Transmission Operators. The distribution of SOLs and IROLs is not included in the proposed set of standards.</p> <p>4. As noted above in response to the first two comments, the Reliability Coordinator may not have time to coordinate this activity.</p> <p>5. There are other standards that require event analysis.</p> <p>6. The proposed addition is not practical as sometimes it takes a great deal of analysis to identify the cause of exceeding an IROL.</p>			
Southern Co		x	<p>The RC has no knowledge of SOLs based on the SDT's recommended changes. So how will the RC coordinate SOL violations as the (new) R6 states in IRO-005-3?</p> <p>The new R11 in IRO-005-3 states the RC shall make known to the TSP all SOLs and IROLs in its area. How does the RC do this when they are NOT expected to study or monitor SOLs?</p> <p>We do agree that EOP-001-0, R2 should be retired.</p>

Consideration of Comments on Draft 7 of the IROL Standards

Question #11			
Commenter	Yes	No	Comment
			<p>Recommend keeping R3 and R6 of IRO-004-1. The RC should develop action plans to return transmission loading to within acceptable SOL or IROLs.</p> <p>Southern also recommends keeping R3, R5, R9, R13, R14, R16, and R17 of IRO-005-2.</p>
<p>Response: Under FAC-014, the Reliability Coordinator does have SOLs and does distribute them to the TSP as well as to other entities. The proposed standards clarify that the primary responsibility for taking action to resolve SOLs rests with the Transmission Operator. If the Transmission Operator needs assistance, the Transmission Operator can ask for assistance when it informs the Reliability Coordinator that it has exceeded an SOL or IROL. The responsibility for resolving SOLs is assigned to the Transmission Operator.</p> <p>TOP-002-2 R1 does require the Transmission Operator to maintain a set of current plans designed to evaluate options and set procedures for reliable operation through a reasonable future time period.</p> <p>TOP-004-1 R6 requires: the Transmission Operator to have and implement formal policies and procedures to provide for transmission reliability including having plans to respond to IROL and SOL violations.</p> <p>TOP-002 R10 requires: Each Balancing Authority and Transmission Operator shall plan to meet all System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs).</p> <p>IRO-009-1 R1 and R2 require the Reliability Coordinator to have plans to prevent and mitigate instances of exceeding IROLs – In some cases, the Reliability Coordinator doesn't have time to 'coordinate' with all the entities that may need to take action as part of a plan to prevent or mitigate an instance of exceeding an IROL. The Reliability Coordinator 'may' coordinate with the entities that are expected to take action but this coordination is not a requirement. The Reliability Coordinator has ultimate responsibility for having these processes, procedures and plans – not the Balancing Authority or Transmission Operator.</p> <p>IRO-009-1 R2 includes language that is more explicit than the language in IRO-004-1 R6: 'results of these studies' is not as specific as 'when an assessment of actual or expected system conditions'.</p> <p>The implementation plan identifies the reasoning for recommending the retirements in IRO-005-2. There is no supporting justification to indicate that these recommendations are not correct, and without significant comments from other stakeholders indicating that these requirements should be retained.</p>			
<p>IESO NPCC CP9 ISO-NE Hydro-Québec TransÉnergie</p>		x	<p>EOP-001 R2 requires that a TOP have an emergency load reduction plan for all identified IROLs. The intent of this requirement is for the TOP to be ready to implement load reduction as directed by the RC to mitigate IROL violations when other control actions have been implemented or are being implemented in parallel. Unless this requirement is covered elsewhere, it needs to be retained to assure a TOP's readiness, which is in a different context than what the requirements in IRO-009 imply. Note that the RC does</p>

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Commenter	Yes	No	Comment
			not own or operate any load reduction scheme. It must rely on the operators of these schemes - the TOP (and DP, as directed by the TOP), to implement load reduction.
<p>Response: Under IRO-009-1 R2, the Reliability Coordinator is required to have plans to prevent or mitigate IROLs. The Reliability Coordinator's plan is expected to include actions assigned to other entities, including the Transmission Operator. Note that EOP-001-0 R3 does require each Transmission Operator to develop, maintain, and implement a set of plans for load shedding.</p> <p>TOP-008 R1 requires the Transmission Operator to take steps to relieve various operating conditions, including shedding firm load. In preparation for TOP-008 R1, the Transmission Operator is expected to have a load shedding plan ready to execute.</p>			
IESO		x	<p>1. We agree with retiring R6 of IRO-004-1, but suggest that a part of R3 in IRO-004-1 which requires that the RC develop the action plans in conjunction with the TOPs be reflected in this standard. This should be a requirement, not just an understanding, and hence needs to be stated explicitly herein.</p> <p>2. We agree that R3, R5 and R9 of IRO-005-2 can be retired. However, the key requirement in R3 and R5 for the RC to correct an IROL violation as soon as possible and within 30 minutes needs to be retained somewhere, preferably in this standard. Not having a time limit to correct IROL violations can result in an IROL being exceeded for an indefinite period of time, subjecting the system to prolonged risks of instability and cascade tripping. The 30 minute also serves as the threshold for curtailing firm load to correct the violation immediately if an IROL violation cannot be corrected by adjusting generation and interchange, reconfiguration, reducing interruptible load, voltage reduction, etc. within that time frame.</p> <p>3. Similar to our comment on IRO-004-1, that part in R9 of IRO-005-2 which requires the RC to coordinate transmission and generation outages needs to be stipulated somewhere, perhaps in the context of the RC approving outages. Hence, retiring R9 should be condition on halaving this coordination/approval requirement covered by this (IRO-009) or another standard.</p> <p>We agree that part 1 of R13, and R16 and R17 of IRO-005-2 can be deleted.</p>
<p>Response:</p> <p>1. In some cases, the Reliability Coordinator doesn't have time to 'coordinate' with all the entities that may need to take action as part of a plan to prevent or mitigate an instance of exceeding an IROL. The Reliability Coordinator 'may' coordinate with the entities that are expected to take action but this coordination is not a requirement. The Reliability Coordinator has</p>			

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Question #11			
Commenter	Yes	No	Comment
<p>ultimate responsibility for having these processes, procedures and plans – not the Balancing Authority or Transmission Operator.</p> <p>2. The definition of IROL Tv has been approved by the NERC BOT: The maximum time that an Interconnection Reliability Operating Limit can be violated before the risk to the interconnection or other Reliability Coordinator Area(s) becomes greater than acceptable. Each Interconnection Reliability Operating Limit's Tv shall be less than or equal to 30 minutes. The standard does require that the IROL be relieved within the IROL's Tv.)</p> <p>3. The only change to IRO-005-2 R9 was to remove the reference to IROLs.</p>			
<p>NPCC CP9 ISO-NE Hydro-Québec TransÉnergie</p>		x	<p>1. NPCC participating members agree with retiring R6 of IRO-004-1, but suggest that a part of R3 in IRO-004-1 which requires that the RC develop action plans in conjunction with the TOPs, be reflected in this standard.</p> <p>2. NPCC participating members believe the key requirement in R3 and R5 is for the RC to correct an IROL violation as soon as possible and within 30 minutes. This needs to be retained somewhere, preferably in this standard. Not having a time limit to correct IROL violation can result in an IROL being exceeded for an indefinite period of time, subjecting the system to prolonged risks of instability and potential cascade tripping. The 30 minutes also serves as the threshold that if an IROL violation cannot be corrected by adjusting generation and interchange, reconfiguration, reducing interruptible load, voltage reduction, etc. within that time frame, curtailment of firm load must also be implemented to correct the violation immediately.</p> <p>3. NPCC participating members believe the concept of the RC approving outages needs to be retained somewhere in the standards, retiring R9 should be conditional on having this coordination/approval requirement covered by this (IRO-009) or another standard.</p>
<p>Response: 1. In some cases, the Reliability Coordinator doesn't have time to 'coordinate' with all the entities that may need to take action as part of a plan to prevent or mitigate an instance of exceeding an IROL. The Reliability Coordinator 'may' coordinate with the entities that are expected to take action but this coordination is not a requirement. The Reliability Coordinator has ultimate responsibility for having these processes, procedures and plans – not the Balancing Authority or Transmission Operator.</p> <p>2. The definition of IROL Tv has been approved by the NERC BOT: The maximum time that an Interconnection Reliability Operating Limit can be violated before the risk to the interconnection or other Reliability Coordinator Area(s) becomes greater than acceptable. Each Interconnection Reliability Operating Limit's Tv shall be less than or equal to 30 minutes. The standard</p>			

Question #11			
Commenter	Yes	No	Comment
does require that the IROL be relieved within the IROL's T _v .)			
3. The only change to IRO-005-2 R9 was to remove the reference to IROLs.			
ATC		x	ATC does not believe that a Reliability Coordinator will be able to identify an SOL that becomes an IROL in real-time if they are not required to monitor SOLs. Additionally ATC does not see the connection between IRO-009 and these three existing standards. IRO-009 is not replacing these requirements therefore they should not be changed.
<p>Response: The implementation plan provided an explanation for retiring or revising each of these requirements.</p> <ul style="list-style-type: none"> ▪ When IRO-009-1 becomes effective, EOP-001-0 R2 should be retired. <ul style="list-style-type: none"> - The Reliability Coordinator, not the Transmission Operator, is responsible for developing plans for mitigating IROLs. There are no measures or levels of non-compliance that need to be revised or retired when EOP-001-0 R2 is deleted. Mitigation plans need to be implemented so that the instance of exceeding the IROL is mitigated within the IROL's T_v, which can be shorter than 30 minutes. ▪ When IRO-009-1 becomes effective, IRO-004-1 R3 and R6 should be retired. <ul style="list-style-type: none"> - IRO-009-1 R1 requires the Reliability Coordinator to have plans to prevent and mitigate instances of exceeding IROLs – under some conditions, the Reliability Coordinator may not have time to 'coordinate' the development of these plans with all of its Transmission Operators and Balancing Authorities. - IRO-009-1 R2 includes language that is more explicit than the language in IRO-004-1 R6: 'results of these studies' is not as specific as 'when an assessment of actual or expected system conditions'. ▪ When IRO-009-1 becomes effective, IRO-005-2 R3, and R5 should be retired. <ul style="list-style-type: none"> - IRO-005 R3 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes. IRO-005 R5 can lead the Compliance Monitor to believe that the Reliability Coordinator has information to see all SOLs, and this is not always true. Every facility in the Transmission Operator's area has a System Operating Limit, but the Reliability Coordinator isn't required to see all these limits and may not have information to determine the cause of instances of exceeding these limits. - IRO-005 R9 is recommended to be modified (remove reference to IROLs) when IRO-009-1 becomes effective because: IRO-005 R9 includes two requirements – one for coordinating outages, and one for coordinating the mitigation of IROLs and other limits. IRO-009-1 includes requirements to have and execute action plans to prevent and mitigate instances of exceeding IROLs. ▪ When IRO-007-1 and IRO-009-1 become effective, IRO-005-2 R13 should be retired. <ul style="list-style-type: none"> - IRO-005 R13 has two requirements – one to direct actions to ensure SOLs and IROLs are not exceeded, and one requirement to operate to the most limiting parameter in situations where there is disagreement on a limit. The first requirement in IRO-015 R13 assumes that the Reliability Coordinator can see all System Operating Limits, and this is not always true. The Reliability Coordinator is responsible for seeing IROLs and controlling operations within its Reliability Coordinator Area so as to prevent instances of exceeding IROLs. 			

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Commenter	Yes	No	Comment
			<ul style="list-style-type: none"> - The second part of IRO-005 R13 requires entities to operate to the most limiting parameter when there is a difference in derived limits. This should be revised so that it is not applicable to the Reliability Coordinator – IRO-007-1 R2 has a similar requirement that is applicable totally to the Reliability Coordinator. ▪ When IRO-009-1 becomes effective, IRO-005-2 R14 should be modified and R16 and R17 should be retired. <ul style="list-style-type: none"> - IRO-005-2 R14 part 1 should be retired and part 2 should be modified as it is not correct. Notifying the Transmission Service Provider of SOLs and IROLs is already addressed under FAC-014 R5.1. The Transmission Service Provider should respect both SOLs and IROLs – R14 implies that the Transmission Service Provider may respect 'either' SOLs or IROLs. - IRO-005 R16 is a mix of requirements and the Missing Measures and Compliance Elements drafting team determined that, as written, R16 is too vague to be measured. The intent of this requirement is duplicated more clearly in IRO-008 and IRO-009. - IRO-005 R17 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes.
Manitoba Hydro		x	MH does not agree with the removal of required coordination between the RC and the Transmission Operator and Balancing Authority. This approach is moving in a direction to undermine reliability.
<p>Response: In some cases, the Reliability Coordinator doesn't have time to 'coordinate' with all the entities that may need to take action as part of a plan to prevent or mitigate an instance of exceeding an IROL. The Reliability Coordinator 'may' coordinate with the entities that are expected to take action but this coordination is not a requirement. The Reliability Coordinator has ultimate responsibility for having these processes, procedures and plans – not the Balancing Authority or Transmission Operator.</p>			
TVA		x	The modification of IRO-005-2 R14 to retire part 1, as stated on page 14 (in the Notes section) is not reflected in the redlined version of IRO-005-3. This change should be made in the redlined version.
<p>Response: Corrected. Good Catch!</p>			
First Energy Corp	x		IRO-005-2 Requirement 9 does not appear to be marked for deletion as proposed above in the files provided with this posting.
<p>Response: Corrected. Good Catch!</p>			
IRC Standards Review Committee	x	x	<p>We agree that R3, R5 and R9 of IRO-005-2 can be retired. Note that R2 in IRO-009-1 stipulates that "...such that the IROL is relieved within the IROL's T_v." For consistency, we suggest that "within the IROL's T_v" be inserted in R4 to reiterate the time limit requirement of an IROL.</p> <p>We agree that part 1 of R13, and R16 and R17 of IRO-005-2 can be deleted.</p>
<p>Response: IRO-009-1 R4 was modified as suggested.</p>			
Pepco Holdings, Inc.	x		

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Question #11			
Commenter	Yes	No	Comment
MISO SSC	x		
PSC of SC	x		
MRO	x		

12. The Drafting Team is recommending that when IRO-010-1 is approved, conforming changes be made to the following standards:

IRO-002-1 — RC – Facilities; Retire R2

IRO-004-1 — RC – Operations Planning; Retire R4, R5

IRO-005-2 — RC – Current Day Operations; Retire R2

TOP-003-0 — Planned Outage Coordination; Modify R1.2

TOP-005-1 — Operational Reliability Information; Retire R1, R1.1; Convert Attachment A to a Reference

TOP-006-1 — Monitoring System Conditions Voltage and Reactive Control; Modify R4

Do you agree with these proposed conforming changes? If not, please identify any conforming change you feel is incorrect.

Summary Consideration: While several commenters did indicate support for the proposed changes, several other commenters listed a variety of reasons for disagreement with the proposed changes. The most frequently cited reason for disagreeing with the proposed changes was a concern that data wouldn't be provided to the Reliability Coordinator in time to meet the Reliability Coordinator's needs. The proposed standards do include requirements for entities to provide data to their Reliability Coordinator. Each Reliability Coordinator can add as much specificity to its data specification requirements as it needs to support reliability – and the new requirement indicates that the Reliability Coordinator's data specification must include the timing and periodicity as well as other criteria (IRO-010-1 R1) related to the submittal of that data.

The drafting team is hopeful that the explanations provided will improve consensus on this issue.

Question #12			
Commenter	Yes	No	Comment
MRO	x		The MRO reviewed the implementation plan and it is clear that IRO-010-1 gives the flexibility to specify the data requirements in R1 and the requirement that the functional entities follow them in R3.
ATC		x	Please see our comments to question 8.
Response: Please see our response to your comments on question 8.			
Entergy		x	IRO-010-1 R3 contains the requirement that the RC provide data and information to other RCs. However, IRO-015-1 R3 already contains that requirement: IRO-015-1 R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. Therefore either the Reliability Coordinator should be deleted from the list of entities specified in IRO-010-1 R3, or, IRO-015 -1 R3 should be deleted from that standard.

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Question #12			
Commenter	Yes	No	Comment
<p>Response: The requirement in IRO-010 is for entities within the Reliability Coordinator Area to provide data to the Reliability Coordinator and the requirement in IRO-015 is for exchange of data between Reliability Coordinators.</p>			
Southern Co		x	<p>While we agree with the SDT's recommendations on TOP-003-0 and TOP-005-1, we disagree with the remainder of the retirement recommendations and suggest keeping the requirements as they are.</p> <p>It is ironic that while the SDT is recommending the removal of requirements which specifically state that the TO, GO, GOP and LSE are to provide the RC with information required for system studies by 1200 noon each day, the Blackout Report stated a concern about the NERC standards' lack of requirements for providing reliability information to the RC.</p> <p>In particular, under the heading of "Data Exchanged for Operational Reliability" in the Blackout Final Report, the Report states that "a variety of up-to-date information on the elements of the system must be collected and exchanged for modeled topology to be accurate in real time."</p> <p>The Report states "there is no current requirement for how quickly asset owners must report changes in element status (such as a line outage) to the SDX. NERC is now developing a requirement for regular information update submittals that is scheduled to take effect in the summer of 2004." [Reference Page 51 of the Report]</p> <p>We are approaching the third anniversary of the publishing of this Report and still have no requirement in any NERC Standard for submitting data to the NERC System Data Exchange.</p>
<p>Response: The proposed standards do include requirements for entities to provide data to their Reliability Coordinator. Each Reliability Coordinator can add as much specificity to its data specification requirements as it needs to support reliability – and note that the new requirement adds timing and periodicity as well as other criteria (IRO-010-1 R1) Note that under the implementation plan, there will never be a time when there isn't a requirement in effect for entities to provide data to the Reliability Coordinator.</p>			
TVA		x	<p>Agree to retire IRO-005-2 R2, however redlined version of IRO-005-3 does not show deletion of the entire R2 (which become R1 in IRO-005-3.)</p>
<p>Response: This typographical error has been corrected so that the revised document shows R2 as being totally retired.</p>			
IRC Standards Review Committee Pepeco Holdings, Inc.		x	<p>(i) We agree with retiring R2 of IRO-002-1. (ii) We do not agree with removing R1.2 from TOP-003-1. Providing transmission outage information to the RC is essential for ensuring the RC is aware of system changes that</p>

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Question #12			
Commenter	Yes	No	Comment
NPCC CP9 ISO-NE Hydro-Québec TransÉnergie IESO			may affect interconnected system reliability. There should not be any prejudgment as to which outage has an impact on SOL only. (iii) We agree with the proposed deletions/changes to IRO-005-2, TOP-005-1 and TOP-006-1.
Response: TOP-003-1 R1.2 was not removed, it was revised to eliminate the obligation to submit data to the Reliability Coordinator because IRO-010 requires entities to provide data to the Reliability Coordinator, and as envisioned, this would include outage schedules and other outage information.			
IESO		x	We agree with retiring R4 and R5 of IRO-004-1. However, the time frame for the RC to complete day-ahead assessment as stipulated in R5 should be retained somewhere as otherwise, there could be mis-coordination, delays and even failure to complete the assessment in time for other operating entities to prepare the system for next day operations.
Response: The proposed standards do include requirements for entities to provide data to their Reliability Coordinator. Each Reliability Coordinator can add as much specificity to its data specification requirements as it needs to support reliability – and note that the new requirement adds timing and periodicity as well as other criteria (IRO-010-1 R1)			
MISO SSC		x	Transmission operators will not have to communicate outage information to the RC with these changes. The requirement to communicate the outage to the RC should not be removed from the transmission operator.
Response: TOP-003-1 R1.2 was not removed, it was revised to eliminate the obligation to submit data to the Reliability Coordinator because IRO-010 requires entities to provide data to the Reliability Coordinator, and as envisioned, this would include outage schedules and other outage information.			
First Energy Corp	x		
PSC of SC	x		
Manitoba Hydro	x		

13. If you are aware of any conflicts between the proposed standard and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement please identify the conflict here. Similarly, if you believe that any requirement in this set of standards has an unnecessary adverse impact on energy markets, please identify the requirement and its adverse impact here.

Summary Consideration: No conflicts were identified.

Question #13			
Commenter	No	Yes	Comment
MRO	x		
IRC Standards Review Committee	x		
Entergy	x		
Southern Co	x		
Manitoba Hydro	x		
PSC of SC	x		
TVA	x		
Pepco Holdings, Inc.	x		
IESO	x		
First Energy Corp	x		
NPCC CP9	x		
ISO-NE	x		
Hydro-Québec TransÉnergie	x		
ATC	x		

14. The drafting team is recommending that these standards be balloted with four separate ballots, according to the following table. There would be a single ballot for IRO-007-1 that would include approval of IRO-007-1 and approval of the retirement of IRO-002-1 R6, and approval of retirement of IRO-003-2 R1 and R2, etc.

Summary Consideration: Most commenters supported having four ballots for the standards.

Question #14			
Commenter	Yes	No	Comment
ATC		x	These four standards should be voted on in a single ballot. The nature of this set of standards and the proposed modification to existing standards are such that a failure of one would cause a major disconnection in NERC standards. For this reason ATC strongly requests that the four standards be balloted as one.
Response: Most commenters supported the subdivision as proposed. Each of the subdivisions is a 'stand alone' set that could be implemented without the need to have approval of the other ballots.			
Southern Co		x	By balloting these standards in 4 separate ballots, certain problems arise. For example, Ballot 4 (IRO-010) says to retire R2 of IRO-002-1. Ballot 1 (IRO-007) says to retire R6 of IRO-002-1. IF one ballot fails and the other passes, Standard IRO-002-1 cannot be approved by the Board because one requirement passed the ballot voting while the other requirement did not.
Response: If one ballot is approved and others aren't, then only the requirements identified in the approved ballot would be changed. For example – if Ballot 4 (IRO-010) is approved and Ballot 1 is not, then IRO-002-2 would include only the approved change to R2 it would not include a change to R6, which would remain in effect.			
Manitoba Hydro	x		
Entergy	x		
PSC of SC	x		
TVA	x		
IRC Standards Review Committee	x		
Pepco Holdings, Inc.	x		
IESO	x		
First Energy Corp	x		
NPCC CP9	x		

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Question #14			
Commenter	Yes	No	Comment
ISO-NE	X		
Hydro-Québec TransÉnergie	X		
MISO SSC	X		
MRO	X		

15. If you have any other comments on this set of standards or its implementation plan that you have not already submitted above, please provide them here.

Question #15	
Commenter	Comment
MRO	<p>The MRO requests clarification as to why the following two definitions were added in IRO-009-1 and never used: Interconnection Reliability Operating Limit Event, and Interconnection Reliability Operating Limit Event Duration. If terms are specifically added to a standard, it is expected that the terms will be used in the standard. If the new terms are not to be used in the standard where they are originally defined, it would appear that the new terms are not needed and should be struck from the standard until a such time that they are to be used.</p> <p>The MRO requests the definition of the term Delay, as it is used in in IRO-009-1-R4. Is the RC considered in violation if it does not act with in one minute? If it does not act with in two-minutes. Leaving this term undefined will result in arbitrary enforcement of this standard</p>
<p>Response: These definitions were used in earlier versions of the standard but aren't needed and have been deleted.</p> <p>The drafting team has been advised not to define terms that use the common 'Webster' dictionary definition. Webster says delay means 'to postpone until a later time, to defer, to procrastinate, tarry or linger.</p>	
Entergy	<p>1. The industry has determined that NERC reliability standards need to be more definitive as to which entities the standards are Applicable. Therefore, Entergy strongly suggests that all Applicability assignments in ALL standards and requirements be changed to be very specific. Therefore, we suggest the Applicability of each standard be changed to - ALL REGISTERED xxx, NO ADDITIONAL CONDITIONS NOR LIMITATIONS WILL BE ADDED TO THE APPLICABILITY OF THIS STANDARD, where xxx is the functional entity to whom the standard applies. Therefore, the Applicability of IRO-007-1 should not be Reliability Coordinator but should be changed to - ALL REGISTERED RELIABILITY COORDINATORS, NO ADDITIONAL CONDITIONS NOR LIMITATIONS WILL BE ADDED TO THE APPLICABILITY OF THIS STANDARD. The Applicability of all other standards should be configured in a similar manner for all entities to whom that particular standard applies.</p> <p>2. Version 6 of IRO-009 contained the requirement:</p> <p style="padding-left: 40px;">R1.4. The reliability coordinator shall document each instance of exceeding an IROL and shall document and complete an IROL violation report for each instance of exceeding an IROL for time greater than that limit's Tv. The reliability coordinator shall file each IROL violation report with its compliance monitor within five business days of the initiation of the event.</p>

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Question #15	
Commenter	Comment
	<p>3. This requirement that a RC must document exceeding an IROL and report each IROL violation has not been included in the current draft, V7, of any of these drafts IRO-007 - 010 and does not seem to be required in any other NERC standards. We suggest it be included in IRO-009-1 as R5 along with appropriate Measures, Compliance requirements, VSL, VRF, and MTH.</p>
<p>Response:</p> <p>1. Regarding Applicability- drafting teams were given the following guidance – if the standard will be applicable to all who register to perform a specific function, then there is no need to add more words to the applicability section – in other words, the ‘default’ is ‘all registered Balancing Authorities.’ The applicability section will only include additional clarification when the applicability is ‘other than all’.</p> <p>2. As written, the Reliability Coordinator provides a data specification to any entity from which it needs reliability-related data.</p> <p>3. The drafting team eliminated these reporting requirements as sanctionable requirements but retained the form and the submission of the form as a tool to use for self-reporting by exception. The act of reporting is not critical to reliability. In addition, the ERO’s Sanctions Guidelines penalize entities that don’t report violations so there is no incentive to ‘not report’ when there is an IROL violation.</p>	
Manitoba Hydro	<p>MH appreciates the effort the drafting team put into the development of these standards and that the material has been organized to facilitate review and comment.</p> <p>MH also endorses the MRO comments: The MRO requests clarification as to why the following two definitions were added in IRO-009-1 and never used: Interconnection Reliability Operating Limit Event, and Interconnection Reliability Operating Limit Event Duration. If terms are specifically added to a standard, it is expected that the terms will be used in the standard. If the new terms are not to be used in the standard where they are originally defined, it would appear that the new terms are not needed and should be struck from the standard until a such time that they are to be used.</p> <p>The MRO requests the definition of the term Delay, as it is used in in IRO-009-1-R4. Is the RC considered in violation if it does not act with in one minute? If it does not act with in two-minutes. Leaving this term undefined will result in arbitrary enforcement of this standard</p>
<p>Response: These definitions were used in earlier versions of the standard but aren’t needed and have been deleted.</p> <p>The drafting team has been advised not to define terms that use the common ‘Webster’ dictionary definition. Webster says delay means ‘to postpone until a later time, to defer, to procrastinate, tarry or linger.’</p>	
MISO SSC	<p>1. IRO-007-1 - Tv is a term that is not defined. Measures do not specify if temporary loss of ICCP or telemetry is an exception or if it is still considered a violation. It should not be considered a violation.</p>

Question #15	
Commenter	Comment
	<p>2. IRO-008-1 - R2 requires that Real-Time Assessments be performed at least every 30 minutes. The definition of Real-Time Assessment leaves open how far into the future the assessments must cover. R3 requires sharing of results to prevent or mitigate exceeding an IROL. It seems like this should require an RC directive to correct the situation. Violation severities do not address temporary loss of ICCP, telemetry or state estimation. They should not be violations.</p> <p>3. IRO-009-1 - Two new terms are defined for inclusion in the glossary: Interconnection Reliability Operating Limit Event and Interconnection Reliability Operating Limit Event Duration. Neither are used in the standard.</p> <p>4. Section 2.3.2 establishes a high violation severity if an IROL was actually exceeded and there was a delay before taking action. Delay is not defined. This leaves this term open for interpretation and will result in inconsistent enforcement. The standard needs to define what is meant by delay. Additionally, we wonder how will the ERO track a given percent of "IROLs identified in advance of real-time" against the number of operating procedures?</p> <p>5. IRO-010-1 - Does R3 create the requirement for a entity to add metering if it does not already exist at a location, if a measurement is requested? This needs to be made clear. Data anomalies such as those caused by a bad RTU are not addressed and need to be made exceptions in the violations severity section.</p> <p>6. While we agree with the concept of consolidating the IROL-related standards, there is more work to do. Requirements regarding IROLs can be boiled down to:</p> <ol style="list-style-type: none"> 1. Have IROLs pre-defined (preparedness). 2. Train and prepare for IROLs (preparedness). 3. Update limits based on conditions (performance). 4. Monitor for and respond quickly to IROLs and correct them within 30 minutes (performance). 5. Communicate reaching IROLs to others (performance). 6. Report violations of the IROL standard (administrative). <p>The acronym IROL shows up 168 times in the present standards. The vast majority of these are restatements of the 6 core requirements in different standards or explanatory information that should</p>

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	not be assigned risk factors or measures.
	<p>Response:</p> <ol style="list-style-type: none"> 1. The term, IROL T_v was defined by the Determine Facility Ratings SDT and was approved with FAC-010. 2. There are justifiable reasons for different Reliability Coordinators to use different time periods when looking into the future. The requirement to direct entities to take actions is addressed in IRO-009-1. Loss of telemetry is not addressed within this standard. The ERO Sanctions Guidelines allow the Compliance Monitor to consider mitigating factors when assessing compliance. 3. These definitions were used in earlier versions of the standard but aren't needed and have been deleted. 4. The violation severity levels were revised to eliminate use of percentages. Note that the drafting team was advised to avoid defining terms such as 'delay' that have the same definition as that found in a Webster Dictionary. 5. There is nothing in the proposed standard that requires an entity to install equipment. There are existing standards that require entities to provide data to the Reliability Coordinator, so entities should already be providing data to the Reliability Coordinator. 6. The drafting team attempted to consolidate requirements that were within the scope of our SAR. If anyone desires to undertake an effort to further consolidate the requirements related to IROLs, anyone can submit a new SAR.
IRC Standards Review Committee Pepco Holdings, Inc.	<ol style="list-style-type: none"> 1. The requirement to monitor, or at least be aware of the impacts on, critical parameters in other RC's areas, as proposed for IRO-007 (M2.1) and IRO-008 (R1) in the previous draft set of standards posted on March 1, 2004, is missing. This monitoring capability is essential for identifying potential reliability impact on other RC areas due to operation plans and real-time operations in one RC area. Note that IRO-010 has this requirement (implicit in R3). 2. R2 of IRO-008 requires that Real-Time Assessments be performed at least every 30 minutes. The definition of Real-Time Assessment leaves open how far into the future the assessments must cover. 3. R3 of IRO-008 requires sharing of results to prevent or mitigate exceeding an IROL. We feel that this should also require an RC to direct taking necessary actions to prepare for correcting the situation. We therefore suggest that "and direct" be inserted after "...the Reliability Coordinator shall share its results with" in R3. 4. Two new terms are defined in IRO-009: Interconnection Reliability Operating Limit Event and Interconnection Reliability Operating Limit Event Duration. Neither are used in this standard; so what is

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	<p>the reason for having these terms defined?</p> <p>5. In IRO-009, Violation Severity Levels, Section 2.3.2 establishes a high violation severity if an IROL was actually exceeded and there was a delay before taking action. The term "delay" is not defined. This leaves this term open for interpretation and will result in inconsistent enforcement. The standard needs to define what is meant by delay.</p> <p>6. In the previous draft standard IRO-009, there was a requirement (R1.4) for the RC to document and complete an IROL violation report for each instance of exceeding an IROL for time greater than that limit's Tv. This requirement is missing in the new version. We feel that this requirement should be stated in this standard.</p> <p>7. We do not have any comments on the proposed measures. However, from a process viewpoint, none of the questions asked in this comment form seek concurrence or comments on any of the measures proposed. Since these measures did not exist in any of the current standards, and have been revised since the last draft versions (posted on March 1, 2004), the industry needs to have an opportunity to offer its view.</p>
<p>Response:</p> <p>1. IRO-007 does require the Reliability Coordinator to monitor its 'Wide Area' which is an approved, defined term – the definition of Wide Area is: The entire Reliability Coordinator Area as well as the critical flow and status information from adjacent Reliability Coordinator Areas as determined by detailed system studies to allow the calculation of Interconnected Reliability Operating Limits.</p> <p>2. There are justifiable reasons for different Reliability Coordinators to use different time periods when looking into the future. The requirement to direct entities to take actions is addressed in IRO-009-1. Loss of telemetry is not addressed within this standard. The ERO Sanctions Guidelines allow the Compliance Monitor to consider mitigating factors when assessing compliance.</p> <p>3. IRO-009-1 includes the Reliability Coordinator's directives.</p> <p>4. These definitions were used in earlier versions of the standard but aren't needed and have been deleted.</p> <p>5. The violation severity levels were revised to eliminate use of percentages. Note that the drafting team was advised to avoid defining terms such as 'delay' that have the same definition as that found in a Webster Dictionary.</p>	

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	<p>6. The drafting team eliminated these reporting requirements because they aren't needed to support reliability. The drafting team expects that any violation of an IROL will have an associated event investigation.</p> <p>7. This 'open-ended' question was intended to collect all comments that weren't provided elsewhere. If anyone has a comment on measures this was the place to provide them.</p>
IESO	<p>1. The requirement to monitor, or at least be aware of the impacts on, critical parameters in other RC's areas, as proposed for IRO-007 (M2.1) and IRO-008 (R1) in the previous draft set of standards posted on March 1, 2004, is missing. This monitoring capability is essential for identifying potential reliability impact on other RC areas due to operation plans and real-time operations in one RC area. Note that IRO-010 has this requirement (implicit in R3).</p> <p>2. R2 of IRO-008 requires that Real-Time Assessments be performed at least every 30 minutes. The definition of Real-Time Assessment leaves open how far into the future the assessments must cover. Please clarify.</p> <p>Using the current definition for Real-Time Assessments, R2 of IRO-008 would require that a complete study for the remainder of the operating day be performed at least every 30 minutes.</p> <p>3. We believe it is more appropriate to consider Real-Time Assessment to mean the use of real-time information to assess system conditions for the current minute up to a certain time period, say, next hour. Operations Planning Analysis, which includes day at hand, should cover the remaining hours for the current day and beyond, up to about a year. We suggest the SDT consider revising the definitions in this manner to add clarity to R2 (and R1 as well) of IRO-008.</p> <p>4. R3 of IRO-008 requires sharing of results to prevent or mitigate exceeding an IROL. We feel that this should also require an RC to direct taking necessary actions to prepare for correcting the situation. We therefore suggest that "and direct as deemed necessary" be inserted after "...the Reliability Coordinator shall share its results with" in R3.</p> <p>5. Two new terms are defined in IRO-009: Interconnection Reliability Operating Limit Event and Interconnection Reliability Operating Limit Event Duration. Neither are used in this standard; so what is the reason for having these terms defined?</p> <p>6. In IRO-009, Violation Severity Levels, Section 2.3.2 establishes a high violation severity if an IROL was actually exceeded and there was a delay before taking action. The term "delay" is not defined. This leaves this term open for interpretation and will result in inconsistent enforcement. The standard needs to define what is meant by delay.</p>

Consideration of Comments on Draft 7 of the IROL Standards

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	<p>7. In the previous draft standard IRO-009, there was a requirement (R1.4) for the RC to document and complete an IROL violation report for each instance of exceeding an IROL for time greater than that limit's Tv. This requirement is currently stipulated in EOP-004, with cross reference to TOP-007. We feel it's more appropriate for the RC to make this report and hence this requirement should be added to IRO-009.</p> <p>8. We do not have any comments on the proposed measures. However, from a process viewpoint, none of the questions asked in this comment form seek concurrence or comments on any of the measures proposed. Since these measures did not exist in any of the current standards, and have been revised since the last draft versions (posted on March 1, 2004), the industry needs to have an opportunity to offer its view.</p>
<p>Response:</p> <p>1. IRO-007 does require the Reliability Coordinator to monitor its 'Wide Area' which is an approved, defined term – the definition of Wide Area is: The entire Reliability Coordinator Area as well as the critical flow and status information from adjacent Reliability Coordinator Areas as determined by detailed system studies to allow the calculation of Interconnection Reliability Operating Limits.</p> <p>2. The definition of Real-time Assessments doesn't require a complete study for the remainder of the operating day.</p> <p>3. The drafting team got consensus on these definitions with a prior posting.</p> <p>4. IRO-009-1 includes the Reliability Coordinator's directives.</p> <p>5. These definitions were used in earlier versions of the standard but aren't needed and have been deleted.</p> <p>6. The violation severity levels were revised to eliminate use of percentages. Note that the drafting team was advised to avoid defining terms such as 'delay' that have the same definition as that found in a Webster Dictionary.</p> <p>7. The drafting team eliminated these reporting requirements because they aren't needed to support reliability. The drafting team expects that any violation of an IROL will have an associated event investigation.</p> <p>8. This 'open-ended' question was intended to collect all comments that weren't provided elsewhere. If anyone has a comment on measures this was the place to provide them.</p>	
<p>NPCC CP9 ISO-NE Hydro-Québec TransÉnergie</p>	<p>1. R2 of IRO-008 requires clarification or the definition of Real-Time Assessments needs to be revised to capture that an assessment needs to be done every thirty minutes and specific made as to how far into the future the assessments must cover.</p> <p>2. R3 of IRO-008 requires sharing of results to prevent or mitigate exceeding an IROL. We feel that</p>

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	<p>this should also require an RC to direct taking necessary actions to prepare for correcting the situation. We therefore suggest that "and direct" be inserted after "...the Reliability Coordinator shall share its results with" in R3. This may clarify the IRO-008 standard but may introduce some redundancy with IRO-009 R3 and R4.</p> <p>3. Two new terms are defined in IRO-009: Interconnection Reliability Operating Limit Event and Interconnection Reliability Operating Limit Event Duration. Neither are used in this standard; so what is the reason for having these terms defined?</p> <p>4. In IRO-009, Violation Severity Levels, Section 2.3.2 establishes a high violation severity if an IROL was actually exceeded and there was a delay before taking action. The term "delay" is not defined. This leaves this term open for interpretation and will result in inconsistent enforcement. The standard needs to define what is meant by delay perhaps specifying a timeframe in the Requirements section R4. Also missing is the requirement to document, with a complete violation report, whenever an IROL violation has been exceeded beyond Tv.</p> <p>5. In the previous draft standard IRO-009, there was a requirement (R1.4) for the RC to document IROL violation incidents. This requirement is missing in the new version. NPCC Participating members believe that this requirement should be stated in this standard.</p> <p>6. NPCC participating members have also expressed concern about these same standards appearing in NERC's Reliability Coordinator SAR project. Coordination of the comments is a major concern especially when the standards will be under revision here and also in that project concurrently.</p>
<p>Response:</p> <ol style="list-style-type: none"> 1. There are justifiable reasons for different Reliability Coordinators to use different time periods when looking into the future. 2. IRO-009-1 includes the Reliability Coordinator's directives. 3. These definitions were used in earlier versions of the standard but aren't needed and have been deleted. 4. The violation severity levels were revised to eliminate use of percentages. Note that the drafting team was advised to avoid defining terms such as 'delay' that have the same definition as that found in a Webster Dictionary. 5. The drafting team eliminated these reporting requirements because they aren't needed to support reliability. The drafting team expects that any violation of an IROL will have an associated event investigation. 	

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<p>6. The Reliability Coordination SAR was modified to remove the proposed IROL Standards from the set of standards included in its scope.</p>	
ATC	<p>This effort must produce a clear definition of what an IROL is and the outcome being avoided by classifying an SOL as an IROL. The definition should include both Real-Time Operations and planning horizon perspectives. There is wide discretion between what everyone believes an IROL is and what events could reasonably be predicted to identify a triggering event that should be classified as an IROL. A clear definition is required in order to identify an IROL in Real-Time Operations and planning studies.</p> <p>IRO-007 Requirement R2 - Has the group discussed the possible situation in which the RCs do not agree that an IROL exists? This requirement gives the impression that an IROL has been agreed to by the RCs but the limit and/or Tv is in dispute. Because the definition of IROL is subjective two RCs could have variations of what SOLs should be classified as IROLs in Real-time.</p> <p>IRO-010 - Requirements 1.1, 1.3 and 1.4 seem to be a fill in the blank requirements for the RCs. This group should develop the data specification requirements.</p> <p>Requirement 1.2 should be deleted and replaced with the following:</p> <ul style="list-style-type: none"> - Industry standard protocol or mutually agreeable format
<p>Response: The term, 'IROL' does have an approved definition. The definition of an IROL was addressed with FAC-010 and FAC-011. If Reliability Coordinators don't agree on an operating value, then the resolution of the disagreement is addressed by the requirement that says both Reliability Coordinators will use the most conservative of the values under consideration. Because each Reliability Coordinator has unique requirements based on the facilities within its boundaries and the tools it has under its control, each Reliability Coordinator should have the right to customize its data specification including the protocol and format in which the data must be provided.</p>	