

## Consideration of Comments on Successive Ballot for Cyber Security 706 – CIP Version 4 Standards

**Summary Consideration:** A successive ballot of the Cyber Security 706 CIP Version 4 standards was conducted from December 1-10, 2010 and achieved a quorum of 86.83% and a weighted segment approval of 77.04%. The following summary of comments and responses is grouped by areas of CIP-002-4.

### General Comments:

Concern was expressed that any clarification included in the Guidance Document should be made part of the Standard. The SDT responded that, while the Guidance Documents are not the standard, they do provide additional context. Other entities expressed concern that the bright line prescribed in Attachment 1 will still include smaller Registered Entities that do not have significant impact on the reliable operation of the BES. The SDT responded that in FERC Order 706, the Commission addressed the importance of Critical Assets, no matter how small. Another entity stated that there needs to be a clear and consistent method for Planning to identify IROLs, or it becomes subjective and open to interpretation. The SDT responded that the purpose of FAC-014-2 Requirements R3 and R4 is to establish a clear and consistent method for identifying IROLs. The method for Planning to identify IROLs is beyond the scope of the CIP standards. Several entities expressed an interest that the SDT should take steps to reduce ambiguous language. (e.g. black start resources). The SDT responded that they have made efforts to reduce any ambiguous language, to the point of using the NERC glossary term "Blackstart Resources" in order to eliminate any confusion over the term. Another entity expressed that criteria for critical assets should be based on critical functions of assets like system restoration, voltage control, maintaining load/generation balance, maintaining flows within IROL/SOL, critical SPS and that the list should not rely on substation voltages or amount of MW. The SDT responded that voltage levels and MW thresholds were used in criteria that had no corresponding bright lines in existing standards.

Several entities stated that the SDT should clarify that substations are the facilities to be identified as Transmission Critical Assets, not lines, transformers, reactive equipment, etc. The SDT responded that substations are not the only Facilities identified as Critical Assets. Lines, transformers, reactive equipment, and other Facilities can be classified as a Critical Asset if they meet any of the criteria in Attachment 1. The SDT referred commenters to the posted guidance document for additional clarification. One entity expressed concern that many items give one entity the power to designate facilities owned by another entity as critical. The SDT responded that the issue of communication

between entities is recognized as an issue that needs to be addressed and will be considered in a future version. Some entities felt that the SDT was prescriptive in determining Critical Assets, which they felt was contrary to FERC Order 706. The SDT responded that the Attachment 1 criteria were developed in response to an external oversight directive in the FERC Order 706. In consideration of this directive, the SDT decided there did not exist across all regions an appropriate third party to provide this type of oversight. Also, external review and oversight carries with it the compliance overhead and arbitration processes analogous to the TFE process. This “bright-line” criteria approach removes the variability of entity defined methodologies that would prompt the need for external review. Additionally, some entities expressed concern that the SDT should begin a similar effort in identifying a bright line criteria for Critical Cyber Assets. The SDT responded that the scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method, not the Critical Cyber Asset Identification method.

One entity stated that they disagree with the removal of R1.2.7 from CIP-002-3. The entities should continue to have the option to add assets which they feel are appropriate. The SDT responded that originally criterion 1.16 was placed in Attachment 1 to provide Responsible Entities the flexibility to include addition items on their existing Critical Asset list that did not meet any other criterion in Attachment 1. The SDT was concerned that having additional Critical Assets without criteria opens the possibility of having the burden of proof on the Registered Entity that they have no additional Critical Assets.

Commenters pointed out a numbering format issue and an abbreviation issue in the Compliance section, and the SDT corrected the issues. Several entities recommended using different wording than “annual.” The SDT responded that the term “annual” exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version. Another commenter stated that FERC & NERC must attempt to provide the security needed, but in a way that balances adequate security with an entities ability to absorb the costs. The SDT and volunteer industry participants have developed appropriate Critical Asset Identification criteria which have been presented to industry through various iterations for review and feedback. In addition, the SDT has attempted to factor in this issue by limiting the scope of Critical Cyber Assets to those shared Cyber Assets that could, within 15 minutes, adversely impact the reliable operation of any combination of units that in aggregate equal or exceed Attachment 1, criterion 1.1.

Many Canadian members of NPCC are of the opinion that in Attachment 1 of the draft CIP-002-4 standard an RC led exclusion provision should be available to allow some facilities to be exempted from the CIP standards. The SDT

believes that having an exception process to the criteria presents the same challenges associated with a risk-based assessment in external review and oversight.

#### Nuclear Applicability:

Several entities expressed concern about the nuclear generation exemption language for nuclear generation plants located in the United States (U.S.) along with the parenthetical text of Attachment 1 criterion stating “including nuclear generation.” They expressed that this leaves the standard ambiguous and in need of clarification based on recent Nuclear Regulatory Commission (NRC) findings. The NRC and NERC have worked closely to address FERC’s Order 706B concerns related to any nuclear balance of plant (BOP) systems, structures and components (SSCs) within a U.S. nuclear power plant that is not regulated by the NRC and subject to NERC CIP standards. However, the NRC letter to NERC dated November 26, 2010 clarifies its findings that “Based on the Commission’s [NRC] determination, the NRC staff does not believe that there will be any SSCs in the BOP that will fall under NERC’s Critical Infrastructure Protection (CIP) standards.” The SDT responded that the phrase “including nuclear generation” in criterion 1.1 is there to define a plant site. Unit output from all units at a single plant site should be included to determine if a plant meets the 1500MW threshold. The evaluation for Critical Cyber Assets is similar. Although it is highly unlikely that nuclear and non-nuclear units share common Cyber Assets, the evaluation should still occur. In addition, the Applicability language has been modified in light of the NRC letter.

#### Requirement R1:

One commenter stated that Requirement R1 should be clarified to require the first list of identified Critical Assets to be developed prior to the effective date of the Standard. The SDT responded that in order to be compliant with CIP-002-4 on the effective date of the standard, the list must be developed by the effective date. This is clarified in the implementation plan. Another commenter believes that CIP-002-4 R1 needs to clearly state “The RE should identify a list of Critical Asset that it owns...” The SDT believes the phrase “a list of its identified Critical Assets” in R1 specifies ownership of the Critical Asset by the Responsible Entity.

#### Requirement R2:

One commenter stated that Requirement R2 should be clarified to require the first list of identified Critical Cyber Assets to be developed prior to the effective date of the Standard. The SDT responded that in order to be compliant

with CIP-002-4 on the effective date of the standard, the list must be developed by the effective date. This is clarified in the implementation plan.

#### Requirement R3:

One commenter stated that Requirement R3 should be modified to require any update of the Critical Asset or Critical Cyber Asset list to be approved. The SDT debated this issue and determined that an annual approval of each list was sufficient.

#### Attachment 1:

##### Criterion 1.1

One entity asked for clarity on the terms "a defined physical footprint" and "commonly accepted generating facility terminology." Additional clarity has been added to the Guidance document. The following sentence was added to the language explaining criterion 1.1: "Single plant location refers to a group of generating units occupying a defined physical footprint, often but not always, these units are surrounded by a common fence, have a common entry point, share common facilities such as warehouses, water plants and cooling sources, follow a similar naming convention (plant name - unit number) and fall under a common management organization." Another commenter was concerned about communication that is necessary between various Responsible Entities to identify Critical Assets. The SDT agreed that communication between various Responsible Entities will be required to ensure that all critical Assets are identified.

##### Criterion 1.2

One commenter expressed that 1000 MVAR was too large, and that there are not any reactive resources that large in their region. They asked if the drafting team is aware of where any 1000 MVAR resources are located. The SDT responded that the survey that NERC conducted earlier this year showed that there were facilities that would qualify at this threshold.

##### Criterion 1.3

One commenter expressed that criterion 1.3 was not consistent with the goal of providing bright line requirements. This criterion requires entity to conduct a study and submit to the Reliability Coordinator, Planning Coordinator or Transmission Planner, who will then determine if a facility qualifies as critical. The SDT responded that there is no burden or obligation placed on the Planning Coordinator or Transmission Planner to designate any unit as needed to avoid Adverse Reliability Impacts in the long-term planning horizon. However, if the PC or TP has identified Adverse Reliability Impacts (the impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection), then any units identified that avoid this scenario must be classified as a Critical Asset. Another entity requested clarification whether this criterion is for "reliability must run" units? The SDT responded that the units identified using criterion 1.3 are not necessarily designated as "reliability must run."

One commenter stated that the Reliability Coordinator should be the entity to determine the criticality of a generation Facility, based on information it receives from the Planning Coordinator. The SDT responded that based on the functional model the Planning Coordinator or the Transmission Planner are the correct entities to perform the evaluation. If it is determined through system studies that a unit must run in order to preserve the reliability of the BES, such as due to a category C3 contingency as defined in TPL-003 or a category D contingency as defined in TPL-004, then that unit must be classified as a Critical Asset.

#### Criterion 1.4

The APPA CIP Task Force identified what they believed to be an unintended consequence - a Catch-22 - from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them

are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.

One commenter expressed concern that the Blackstart Resources term used in Criteria 1.4 and 1.5 is in the NERC Glossary and is used in EOP-005-2. However this standard and the related definition are not approved by FERC yet. So what happens if the definition of Blackstart Resource is significantly changed after approval of this standard? The SDT responded that this concern was noted prior to the second posting and the implementation plan was revised to clarify the issue.

Another commenter suggested that NERC consider a "Black Start Tier Methodology" in which only "Primary Black Start Units" would fall under stringent compliance scrutiny and obligations, while other "Secondary Tier Units" would still be made available with required annual testing and operating specifications but be taken off the scope of NERC compliance. The SDT responded that a tiered approach to Blackstart Resources is a good idea, and the SDT suggested that a SAR be submitted by the entity outlining this approach to EOP-005-2. Other commenters suggested that a 1500MW limit be included in this criterion. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as a Critical Asset

#### Criterion 1.5

A few commenters suggested alternate wording for this criterion. The SDT discussed the merits of each, but ultimately decided to keep the posted wording unchanged.

#### Criteria 1.6 and 1.7

One commenter stated that this criterion should have another factor based on the size of the facility such that loss of the Facility would have an adverse impact on the BES. The SDT will take this suggestion under consideration for future revisions. Another commenter stated that the Generator Interconnection Facilities as defined in the NERC project [http://www.nerc.com/filez/standards/Project2010-07\\_GOTO\\_Project.html](http://www.nerc.com/filez/standards/Project2010-07_GOTO_Project.html), should be excluded from the Transmission Facilities. The SDT believes that the Guidance document is the appropriate place for this discussion until the Generation Interconnection Facilities are incorporated into the standards.

Another commenter believed the list of relevant transmission facilities developed by the Responsible Entity should be subject to an impact-based assessment by the Reliability Coordinator who has the wide-area view of the system. If necessary, an additional requirement that requires the RC to have a risk-based assessment methodology and to conduct the assessment should be included. Such an arrangement would be akin to the exemption provisions advocated by FERC in its Final Rule on Revisions to the ERO definition of Bulk Electric System. The SDT considered placing various analysis requirements on the Reliability Coordinator. The Functional Model describes the Reliability Coordinator as “The functional entity that maintains the Real-time operating reliability of the Bulk Electric System within a Reliability Coordinator Area.” However, the nature of the Critical Asset list is long-term, since implementation of CIP-003 to CIP-009 is up to two years. Based on this, it was determined that the Reliability Coordinator was not an appropriate entity for this analysis.

#### Criterion 1.8 and 1.9

One commenter stated that there should be some obligation that the parties that identify the Transmission Facility as critical also notify the Transmission Owner and Operator of that identification so the Transmission Owner and Operator are aware and can protect. The SDT responded that FAC-014-2 R5 contains information concerning communication of Facilities that are critical to the derivation of Interconnection Reliability Operating Limits (IROLs) and their associated contingencies.

Another commenter expressed that the Reliability Coordinator be removed from the criterion that identifies Critical Asset facilities based on Interconnection Reliability Operating Limits (IROLs). The SDT responded that according to FAC-014-2 Requirement R1 “The Reliability Coordinator shall 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 Methodology.” Since they have a

responsibility to ensure that the IROLs are established and consistent with their SOL methodology, it is valid to list them in this Criterion.

#### Criterion 1.10

Several commenters stated that the phrase “directly” should be included in Criterion 1.10 which existed in the previous draft. The SDT responded that several commenters in the first posting were concerned about the use of the term “directly.” After consideration by the SDT, it was determined that the term could be removed without affecting the intent of the criterion. One commenter expressed concern that, in so much as Criterion 1.1 could result in the identification of generation plant locations with no Critical Cyber Assets, the resulting requirements in Criterion 1.10 could result in expending efforts protecting transmission assets that might not otherwise need to be protected, diverting resources that might be more effectively expended elsewhere. The SDT responded that the intent of Criterion 1.10 is to ensure the availability of Facilities necessary to support those generation Critical Assets. Any Transmission Facility that the loss of which would result in the loss of a Critical Asset identified in criterion 1.1 or 1.3 would need to be classified as a Critical Asset.

#### Criterion 1.11

Several commenters stated that this criterion should either be removed or revised to “Transmission Facilities providing offsite power requirements as identified in the Nuclear Plant Interface Requirements.” The SDT responded that Criterion 1.11 is based on NUC-001-2 R9.2.2 “Identification of facilities, components, and configuration restrictions that are essential for meeting the NPIRs.” While the purpose of NUC-001-2 states “This standard requires coordination between Nuclear Plant Generator Operators and Transmission Entities for the purpose of ensuring nuclear plant safe operation and shutdown,” it is a NERC reliability standard and as such helps to ensure the reliability of the Bulk Electric System.

#### Criterion 1.12

One commenter stated that the phrase “for failure to operate as designed” is inappropriate. Most SPS's are installed for automatic response to multi-contingency events. For an IROL to be exceeded, the multi-contingency event would need to occur at system conditions that would cause an IROL to be exceeded at the same time that the SPS failed to operate. The probability of the multi-contingency event occurring at such system conditions is very small (e.g., 1 in

50 year order of magnitude frequency), and the SPS would need to fail at that same time. The SDT responded that “Failure to operate as designed” was added to this criterion to account for human error, misconfigurations, improper change management (whether unintentional or malicious)

### Criterion 1.13

Several commenters asked that the Guidance Document be modified to provide the reasoning behind the 300 MW criteria listed in criterion 1.13. The SDT responded that the posted Guidance document has been modified to add reasoning for the threshold level. Other commenters suggested alternate wording for the criterion. The SDT discussed the merits of each, but ultimately decided to keep the posted wording unchanged.

Some commenters stated that criterion 1.13 should be reworded to indicate that distributed UFLS or UVLS schemes (i.e., individual UF or UV relays operating independently in multiple substations) are not considered to be a critical asset. Collectively the UFLS or UVLS scheme may shed more than 300MW; however, due to the distributed nature of the scheme, the UFLS or UVLS schemes are not considered to be a critical asset. The SDT spent considerable time discussing the wording of criterion 1.13, and chose the term “Each” to represent that the criterion applied to a discrete system or Facility. The SDT responded that a discrete component that sheds more than 300MW of load due to the implementation of Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program is a Critical Asset. This criterion is intended to include as Critical Assets regional Under Frequency Load Shedding and Under Voltage Load Shedding schemes.

One commenter expressed concern that the owner of a UFLS system, Distribution Provider, is not listed in the applicability section of this Standard. The SDT does not feel it necessary at this time to include Distribution Providers in the Applicability section but may consider this in future revisions of the Standards. Distribution Providers may own certain very limited BES Cyber Assets, generally limited to UFLS and UVLS relays. However, additional functional entities (i.e. Transmission Operators) generally provide aggregate control of these relays.

### Criterion 1.15

One commenter asked for clarification on the term “control generation.” The SDT responded that Attachment 1 criteria refer to control centers which control generation. The guidance document provides additional clarity that “control centers generally perform control center functions for multiple BES assets. These Facilities are evaluated as

a control center. Facilities that perform control center functions for only a single BES asset should be evaluated as part of the BES asset (e.g., control room for a single generation plant or transmission substation)." Another commenter was concerned about confusion in both applying and auditing what are apparently two independent criteria presented together as a single criterion, and recommended separation of this criterion into two criteria. The SDT decided to group the criteria for control centers based on functionality. Separating them does not appear to add any additional clarity to the criteria.

Another entity expressed concern that if a small utility, as a joint owner, has control over only a small portion of a large plant that falls under the brightline of criterion 1.1, they are concerned that as currently written, the first sentence of criterion 1.15 would designate this small utility's control center as critical. The SDT responded that the concern is that the joint owner's control center could provide a path to compromise the functionality of the generation designated a Critical Asset.

#### Criteria 1.16 and 1.17

One commenter stated that they believe that in Criterion 1.16 the functional obligation should be clearly defined to include those pertaining to the real-time operations and NOT all. The SDT responded that due to the direct impact on the operation of identified Critical Assets, these Transmission control centers must be designated as Critical Assets. Attachment 1 criteria are used to identify control centers as Critical Assets. The consideration of specific reliability functions would be a part of the entity identifying Critical Cyber Assets which support the control center.

#### Implementation Plan

One entity stated that the proposed implementation is too aggressive. Physical Security Perimeters are expensive and it may not be possible to fund these modifications in the short timeframe for compliance. A 3-year implementation period would be more appropriate. The SDT believes there is precedent showing this implementation period is reasonable. Upon FERC Approval, the Responsible Entity has a minimum of 2 years to become compliant with new Critical Cyber Assets. This period is consistent with the implementation plan for version 1 of the CIP Cyber Security Standards and the implementation plan for Registered Entities identifying their first Critical Cyber Asset.

Balloter	Company	Segment	Vote	Comment
Kirit S. Shah	Ameren Services	1	Affirmative	<p>1. We suggest Criteria 1.6, 1.7 and 1.10 should be changed to include substations and switchyard (station) only and not “Facilities”. Based on the definition of “Facilities” and application of Criteria 1.6, 1.7 and 1.10, the Critical Asset list now would include transmission lines. Our concern is that there will be significant issue to comply with CIP-003 through CIP-009 (for example, physical security requirements) for the transmission line assets, if some components installed on the lines fall into cyber asset category, such as temperature or flow monitoring devices or fiber optics used for communication.</p> <p>2. The Blackstart Resources term used in Criteria 1.4 and 1.5 is in the NERC Glossary and is used in EOP-005-2. However this standard and the related definition are not approved by FERC yet. So what happens if the definition of Blackstart Resource is significantly changed after approval of this standard? We suggest that the definition of Blackstart Resources should be included in this standard.</p>
Jennifer Richardson	Ameren Energy Marketing Co.	6		<p>3. The phrase “directly” should be included in Criterion 1.10 which existed in the previous draft. We believe that after removing this term, the revised wordings now are more confusing.</p> <p>4. We believe that in Criterion 1.16 the functional obligation should be clearly defined to include those pertaining to the real-time operations and NOT all. We suggest that Criterion 1.16 should be modified to read “Each control center or backup control center used to perform the functional obligations, pertaining to real time operation of the BES, of the Transmission Operator that includes control of at least one asset identified in criteria 1.2, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11 or 1.12.”</p> <p>5. We believe that in Criterion 1.17 the functional obligation should be clearly defined to include those pertaining to the real-time operations and NOT all. Further this criterion should make clear that the 1500 MW is calculated on the same basis as defined in Critetion 1.1. We suggest that Criterion 1.17 should be modified to read, “Each control center or backup control center used to perform the functional obligations, pertaining to real time operation of</p>

Balloter	Company	Segment	Vote	Comment
				<p>the BES, of a Balancing Authority if its Balancing Authority Area(s) includes at least one asset identified in criteria 1.1, 1.3, 1.4, or 1.13. Each control center or backup control center used to perform the functional obligations pertaining to real time operation of the BES, of a Balancing Authority if its Balancing Authority Area(s) includes an aggregate of 1500 MW in a single Interconnection, calculated using the highest rated net Real Power capability of each unit during the preceding 12 months.</p> <p>6. During the Webinar, references were made to the Guidance Document. However, the Guidance Document is NOT the standard and can not be used in the compliance audit. So, any clarification included in the Guidance Document should be made part of the Standard.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>1. The SDT does not feel this change is necessary. Please refer to the first bullet in the Overall Application of Attachment 1 in the posted Guidance document for a discussion of the SDT’s reason for the use of the term “Facility.”</p> <p>2. Your concern was noted prior to the second posting and the implementation plan was revised with the following: “The term Blackstart Resource, used in CIP-002-4 Attachment 1, was submitted for regulatory approval with Project 2006-03 – System Restoration and Blackstart. The definition must be approved before Criteria 1.4 and 1.5 are used to determine Critical Assets for Responsible Entities.” The language has been revised in this posting to “The term Blackstart Resource, used in CIP-002-4 Attachment 1, was submitted to FERC for regulatory approval in the US with Project 2006-03 – System Restoration and Blackstart. The Effective Date of EOP-005-2 is the date that Criteria 1.4 and 1.5 will be used to determine Critical Assets for any Responsible Entity.”</p> <p>3. Several commenters in the first posting were concerned about the use of the term “directly.” After consideration by the Standard Drafting Team, it was determined that the term could be removed without affecting the intent of the criterion.</p> <p>4. Due to the direct impact on the operation of identified Critical Assets, these Transmission control centers must be designated as Critical Assets. Attachment 1 criteria are used to identify control centers as Critical Assets. The consideration of specific reliability functions would be a part of the entity identifying Critical Cyber Assets which support the control center.</p> <p>5. Due to the direct impact on the operation of identified Critical Assets, these Balancing Authority control centers must be designated as Critical Assets. The impact to the identified Critical Assets would be in real time, as the Balancing Authority functions in the Functional Model involve real time operations. If a Balancing Authority can control 1500MW or more of generation, it is considered a Critical Asset. The language in criterion 1.1 was taken from MOD-024, which is only applicable to Generation Owners.</p> <p>6. While the Guidance Documents are not the standard, they do provide additional context. The SDT believes the wording in the posted standard provide sufficient clarity.</p>				

Balloter	Company	Segment	Vote	Comment
Paul B. Johnson	American Electric Power	1	Affirmative	While not all of the concerns AEP raised in the last comment period were addressed, AEP can support this draft moving forward.
Edward P. Cox	AEP Marketing	6		
Brock Ondayko	AEP Service Corp.	5		
<b>Response:</b> Thank you for your comments.				
Jason Shaver	American Transmission Company, LLC	1	Affirmative	ATC supports Version 4 of the CIP Standard, however, believes that Attachment 1, the so-called bright line criteria, language needs to be clarified. There needs to be a clear and consistent method for Planning to identify IROLs, or it becomes subjective and open to interpretation. Please refer to ATC's recommended changes to the Criteria in their submitted comments for the NERC project.
<b>Response:</b> Thank you for your comments. The purpose of FAC-014-2 Requirements R3 and R4 is to establish a clear and consistent method for identifying IROLs. The method for Planning to identify IROLs is beyond the scope of the CIP standards.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	BGE thanks the SDT for their positive response to the previously submitted comments. BGE asks that the SDT consider adding to the Guidance Document the reasoning behind the 300 MW criteria listed in the automatic load shedding criteria 1.13 in Appendix 1.
<b>Response:</b> Thank you for your comments. The posted Guidance document has been modified to add reasoning for the threshold level.				
Gordon Rawlings	BC Transmission Corporation	1	Negative	<p>BC Hydro agrees with the controls suggested around remote access but some clarification is required R6 - This is pretty wide open. Suggest that specific requirements be put forth so entities know exactly what they need to comply with. Instead of providing "examples" or "includes", explicitly define those items that constitute support and maintenance.</p> <p>R6.4.2 – Recommends the use of SIEM technology to "alert" on access attempts by unauthorized parties. This automates the monitoring but would need clarification that this satisfies this requirement.</p> <p>R6.5 - Such a user agreement does make these users aware of their respective responsibilities in</p>

Balloter	Company	Segment	Vote	Comment
				<p>ensuring the security of the CCA in question. However, this is a weak control as an entity cannot influence direct control over how these entities implement security (i.e. Areva desktops) on their computer devices used to support entities CCAs. Does having such a signed agreement in place satisfy compliance? Can these agreements be entered into with organizations (i.e. Areva) as security policies are typically enforced uniformly throughout organizations?</p>
<p><b>Response:</b> Thank you for your comments. Your comments will be passed on to the Project 2010-15 drafting team.</p>				
Donald S. Watkins	Bonneville Power Administration	1	Negative	<p>BPA believes that the bright line criteria approach in CIP-002-4 is an improvement over prior versions. However, it still does not address the concern by the industry in regards to providing sufficient clarity to many portions of CIP-002-4 to make it acceptable to the majority of utilities that must understand and develop strategies to meet the standards and requirements and implement them in a reasonably timely fashion. BPA still supports the formal comments that we submitted in October 2010. Additional comments:</p> <p>CIP-002-4 R2.1. "The Cyber Asset uses a routable protocol to communicate outside the Electronic Security Perimeter" does not go far enough in its definition of what qualifies as a critical cyber asset and needs further clarification, particularly concerning serial devices. For example: What exactly is meant by "uses a routable protocol to communicate outside the Electronic Security Perimeter"?</p>
Rebecca Berdahl	Bonneville Power Administration	3		<ol style="list-style-type: none"> <li>1. Can a device that is not capable of native routable protocol (does not have, or use an ethernet card) qualify as using routable protocol?</li> <li>2. Does a device that is not capable of native routable protocol, that is connected to a device which is ethernet connection outside the ESP (Serial to Ethernet Converter) qualify?</li> </ol>
Francis J. Halpin	Bonneville Power Administration	5		<ol style="list-style-type: none"> <li>3. Does a device that is not capable of native routable protocol, but is connected to a Terminal Server, which is ethernet connected outside the ESP qualify?</li> <li>4. Does it make a difference if there is only view access to the internal ESP device with no</li> </ol>

Balloter	Company	Segment	Vote	Comment
Brenda S. Anderson	Bonneville Power Administration	6		<p>possible ability to control it?</p> <p>5. What if the device is connected to another device which is ethernet connected, but it simply dumps to a data-store on that device, and there is no access through to the data-store device (the internal ESP device)?</p> <p>6. What if the device itself never initiates communications outbound, and can only be connected to if access is initiated to it from elsewhere?</p> <p>7. What if the device has no ability to connect to and influence any other device?</p> <p>8. What if you can't connect to that device and through it connect to any other device?</p> <p>9. What if the Serial to Ethernet device between the Cyber Asset and the network strips all routable protocol information off and forwards only non-routable data to the Cyber Asset.</p>
<p><b>Response:</b> Thank you for your comments.                      Requirement R2: This language has existed in versions 1 through 3 of CIP-002. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. Also, please refer to the "Identifying Critical Cyber Assets" document for additional clarification.</p>				
Melissa Kurtz	U.S. Army Corps of Engineers	5	Negative	<p>-- The bright line criteria for identification of Critical Assets takes away the flexibility of entities to define what their Critical Assets are --The latest revision to Attachment 1 no longer includes an item indicating that the Responsible Entity may include any additional assets that the Responsible Entity deems appropriate to include. --CIP-002-4 R2.1. "The Cyber Asset uses a routable protocol to communicate outside the Electronic Security Perimeter" does not go far enough in its definition of what qualifies as a critical cyber asset and needs further clarification, particularly concerning serial devices. For example: What exactly is meant by "uses a routable protocol to communicate outside the Electronic Security Perimeter"?</p> <p>1. Can a device that is not capable of native routable protocol (does not have, or use an ethernet card) qualify as using routable protocol? 2. Does a device that is not capable of native routable protocol, that is connected to a device which is ethernet connection outside the ESP (Serial to Ethernet Converter) qualify? 3. Does a device that is not capable of native routable protocol, but is connected to a Terminal Server, which is ethernet connected outside the ESP qualify? 4. Does it make a difference if there is only view access to the internal ESP device with no possible ability to control it? 5. What if the device is connected to another device which is ethernet connected, but it simply dumps to a data-store on that device, and there is no access</p>

Balloter	Company	Segment	Vote	Comment
				<p>through to the data-store device (the internal ESP device)? 6. What if the device itself never initiates communications outbound, and can only be connected to if access is initiated to it from elsewhere? 7. What if the device has no ability to connect to and influence any other device? 8. What if you can't connect to that device and through it connect to any other device? 9. What if the Serial to Ethernet device between the Cyber Asset and the network strips all routable protocol information off and forwards only non-routable data to the Cyber Asset.</p>
<p><b>Response:</b> Thank you for your comments.                      Requirement R2: This language has existed in versions 1 through 3 of CIP-002. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. Also, please refer to the "Identifying Critical Cyber Assets" document for additional clarification.</p>				
Tony Kroskey	Brazos Electric Power Cooperative, Inc.	1	Negative	<p>Brazos Electric appreciates the work of the SDT and is supportive of the efforts and the general concepts of this draft. This is a negative vote due to disagreement over some elements in Attachment 1 criterion. See comments separately submitted.</p>
<p><b>Response:</b> Thank you for your comments. Please refer to the response to comment document.</p>				
Paul Rocha	CenterPoint Energy	1	Negative	<p>CenterPoint Energy was extremely disappointed in this latest effort from the SDT and cannot support the proposed Standard in its current form. While the SDT did revise some criteria in Attachment 1 in response to industry comments, CenterPoint Energy believes the latest proposed Standard is less palatable than the previous version. Specific CenterPoint Energy concerns are as follows.</p> <p>The SDT's response to comments on Criterion 1.4 would seem to indicate a belief that the industry does not understand the term "Blackstart Resource". To the contrary, CenterPoint Energy believes the SDT fails to understand the contents of restoration plans and the far reaching implications of this criterion as pointed out by multiple comments.</p>

Balloter	Company	Segment	Vote	Comment
				<p>CenterPoint Energy believes the revisions made to Criterion 1.5 do not adequately address commenter’s concerns and, in fact, adds ambiguity to the Standard. The SDT did not address concerns regarding the phrase “initial switching requirements”. In addition, the moving of the phrase, “...as identified in the Transmission Operator’s restoration plan” to the end of the criterion potentially adds a requirement to the restoration plan where none currently exists.</p> <p>In Criterion 1.10, comments were made asking for clarity for the term “directly connected”. Instead of providing the requested clarity the SDT chose to delete the word “directly” resulting in an even more ambiguous criterion.</p> <p>CenterPoint Energy is particularly concerned that the SDT chose to dismiss comments regarding Criterion 1.11. The SDT appears to have based its decision on a false understanding of the purpose of NUC-001-2. In its response, the SDT stated; “Since these facilities were deemed so important that a NERC reliability standard was written and adopted to clarify the issue, the SDT determined that this was adequate justification to include them as Critical Assets.” Using the SDT’s logic, any BES facility or practice addressed by a NERC Standard would be deemed “critical” to BES reliability. Moreover, the Purpose section of NUC-001-2 clearly states that the Standard was developed to require “...coordination between Nuclear Plant Generator Operators and Transmission Entities for the purpose of ensuring nuclear plant safe operation and shutdown.” In addition, as previously pointed out by CenterPoint Energy, as per NUC-001-2 R2, NPIR’s are developed by a negotiated methodology between the NPGO and the Transmission Entity. As a result the facilities essential to meeting the NPIR’s are also a result of a negotiated methodology, therefore each situation could have an entirely different set of NPIR’s and associated facilities. CenterPoint Energy fails to see this as a “bright line” criterion.</p> <p>CenterPoint Energy strongly disagrees with the SDT’s revisions to Criterion 1.13. In its response to comments, the SDT gives no indication any comments indicated a need to include UFLS and UVLS in this criterion. In fact, the SDT stated that several commenters indicated a need to clarify that this criterion applied to a single common control system only. Instead of addressing this concern, the SDT chose to go in a different direction as it completely changed the criterion from pertaining to a common control system to one that could possibly be applicable to distributed</p>

Balloter	Company	Segment	Vote	Comment
				<p>load shedding devices on an entity’s distribution system. The SDT’s statement “This criterion was intended to include as Critical Assets regional Under Frequency Load Shedding and Under Voltage Load Shedding schemes” demonstrates a clear lack of understanding of UFLS and UVLS load shedding schemes as they are applied throughout the industry.</p> <p>In summary, CenterPoint Energy believes that the SDT has demonstrated a lack of understanding of industry practices and is unwilling or unable to adequately address industry concerns. Members of the SDT should represent industry stakeholders and produce Standards the industry can support. However, SDT’s are not voted into position by industry stakeholders and therefore are not accountable to the industry, as evidenced by the unresponsive nature of this SDT. If the revised Standard is again rejected by the industry, CenterPoint Energy recommends the current SDT be disbanded and a new SDT be seated in order to complete this project in a reasonable fashion that addresses industry concerns and meets Commission directives. CenterPoint Energy believes there is value to retaining SDT members who dissented from the majority opinion of the SDT, and supports a process to allow such existing SDT members who dissented from the majority opinion to apply for the new SDT if CenterPoint Energy’s proposal is accepted.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>Criterion 1.4 - The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p> <p>Criterion 1.5 – EOP-005-2 Requirement R1.5 states “Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the unit(s) to be started.” This is already an element of the Transmission Operator’s restoration plan.</p> <p>Criterion 1.10 - Several commenters in the first posting were concerned about the use of the term “directly.” After consideration by the Standard Drafting Team, it was determined that the term could be removed without affecting the intent of the criterion.</p> <p>Criterion 1.11 - Criterion 1.11 is based on NUC-001-2 R9.2.2 “Identification of facilities, components, and configuration restrictions that are essential for meeting the NPIRs.” While the purpose of NUC-001-2 states “This standard requires coordination between Nuclear Plant Generator Operators and Transmission Entities for the purpose of ensuring nuclear plant safe operation and shutdown,” it is a NERC reliability standard and as such helps to ensure</p>				

Balloter	Company	Segment	Vote	Comment
<p>the reliability of the Bulk Electric System.</p> <p>Criterion 1.13 - During the previous ballot and comment period, the SDT received many comments on this criterion. Some commenters stated that the previous wording of this criterion would inadvertently bring in all SCADA systems with the capability of shedding load even if such SCADA systems are in fact not planned or operated to perform load shedding. This was not the intent of the SDT. Other commenters stated that this item needs to be clarified to confirm that it applies to a single common control system only, and not multiple but separate “like” systems that in aggregate are capable of load shedding up to 300 MW. Also, the criterion needs to be clarified to confirm that it applies to systems “configured” for automatic load shedding, not simply just “capable” of load shedding. This criterion was intended by the SDT to include as Critical Assets regional Under Frequency Load Shedding and Under Voltage Load Shedding schemes.</p> <p>The SDT is appointed by the Standards Committee, the process of which is outside the scope of Project 2008-06.</p>				
David Batz	Edison Electric Institute	1	Abstain	<p>EEI supports approval of this draft of CIP-002-4. We are concerned about ambiguous language that could lead to confusion or be open to interpretation. We recommend that the Standards drafting team consider suggestions to add clarity, particularly regarding the scope of black start facilities that will be subject to designation as Critical Assets.</p>
<p><b>Response:</b> Thank you for your comment. The SDT has made every effort to reduce any ambiguous language. In your example the SDT chose the NERC glossary term “Blackstart Resources” in order to eliminate any confusion over the term.</p>				
Ajay Garg	Hydro One Networks, Inc.	1	Negative	<p>Hydro One restates its position and maintains its negative vote for the following reasons:</p> <ol style="list-style-type: none"> <li>1. We do not believe the standard will result in an improvement in reliability since the revisions merely replace the risk-based assessment methodology in the current version with a list of criteria that will ultimately result in inclusion of facilities on the Critical Assets list that are non-impactive on the reliability of the BES.</li> <li>2. We do not agree with criteria 1.6 and 1.7 in Attachment 1 as written. Application of these criteria would result in the inclusion of facilities that will have no impact on the BES reliability. We believe that the list of applicable facilities should be determined following an impact-based assessment to be performed by the Reliability Coordinator or the Planning Coordinator. If necessary, an additional requirement that requires the RC or PC to have a risk-based assessment</li> </ol>

Balloter	Company	Segment	Vote	Comment
David L Kiguel	Hydro One Networks, Inc.	3		<p>methodology and to conduct/review the assessment should be included. We therefore propose the following wording to replace 1.6 and 1.7 in Attachment 1: 1.6 Transmission facilities operated at 500 kV or higher, unless the annual review performed by the RC (or the PC) determines that destruction, degradation or unavailability of those assets will have no impact outside the local area and will not cause BES instability, separation, or cascading outages. 1.7 Transmission Facilities operated at 300 kV, at stations or substations interconnected at 300 kV or higher with three or more other transmission stations or substations, unless the annual review performed by the RC (or the PC) determines that destruction, degradation or unavailability of those assets will not have impact outside the local area and will not cause BES instability, separation, or cascading outages.</p> <p>3. We do not believe the SDT addressed our comments submitted with the previous ballot.</p>
<p><b>Response:</b> Thank you for your comments.                      The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method.                      The SDT considered placing various analysis requirements on the Reliability Coordinator. The Functional Model describes the Reliability Coordinator as “The functional entity that maintains the Real-time operating reliability of the Bulk Electric System within a Reliability Coordinator Area.” However, the nature of the Critical Asset list is long-term, since implementation of CIP-003 to CIP-009 is up to two years. Based on this, it was determined that the Reliability Coordinator was not an appropriate entity for this analysis. In addition, the SDT believes that having an exception process to the criteria presents the same challenges associated with a risk-based assessment in external review and oversight.</p>				
Bernard Pelletier	Hydro-Quebec TransEnergie	1	Negative	<p>1.3 Each generation Facility that the Planning Coordinator or Transmission Planner or the RC designates and informs the Generator Owner as necessary to avoid BES Adverse Reliability Impacts in the long-term planning horizon.</p> <p>1.6 Transmission facilities operated at 500 kV or higher, unless the annual review performed by the RC determines that destruction, degradation or unavailability of those assets will have no impact outside the local area and will not cause BES instability, separation, or cascading outages.</p> <p>1.7 Transmission Facilities operated at 300 kV or higher interconnected at 300 kV or higher with three or more other transmission stations, unless the annual review performed by the RC determines that destruction, degradation or unavailability of those assets will not have impact outside the local area and will not cause BES instability, separation, or cascading outages. Also, we believe that to be an effort to "cast a wider net" and capture more assets without qualifying their actual criticality.</p>

Balloter	Company	Segment	Vote	Comment
				Attachment 1 inclusion criteria for critical assets should be based on critical functions of assets like: system restoration, voltage control, maintaining load/generation balance, maintaining flows within IROL/SOL, critical SPS. This list should not rely on substation voltages or amount of MW.
<p><b>Response:</b> Thank you for your comments.</p> <p>The SDT considered placing various analysis requirements on the Reliability Coordinator. The Functional Model describes the Reliability Coordinator as “The functional entity that maintains the Real-time operating reliability of the Bulk Electric System within a Reliability Coordinator Area.” However, the nature of the Critical Asset list is long-term, since implementation of CIP-003 to CIP-009 is up to two years. Based on this, it was determined that the Reliability Coordinator was not an appropriate entity for this analysis. In addition, the SDT believes that having an exception process to the criteria presents the same challenges associated with a risk-based assessment in external review and oversight.</p> <p>The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. Voltage levels and MW thresholds were used in criteria that had no corresponding bright lines in existing standards.</p>				
Michael Gammon	Kansas City Power & Light Co.	1	Affirmative	The proposed bright line is not clear for some of the bright line items. Items that are not clear introduces uncertainty and promotes interpretation issues and debates. The current proposal does not go far enough to exclude the facilities of smaller entities that do not have a significant impact on the reliability of the bulk electric system.
Charles Locke	Kansas City Power & Light Co.	3		
Jessica L Klinghoffer	Kansas City Power & Light Co.	6		

Balloter	Company	Segment	Vote	Comment
<p><b>Response:</b> Thank you for your comment.                      The SDT has made effort to reduce any ambiguous language. Bright line criteria by its very nature may overreach in some areas and under-reach in others, with the end result being a more protected system on average.</p>				
John W Delucca	Lee County Electric Cooperative	1	Negative	<p>Compliance Monitoring Process Section D paragraph 1.1.2 of the CIP2v4 standard seeks to identify exceptions to the RE acting as the CEA but then lists as an exception an example where the RE DOES serve as the CEA. The intent of 1.1.2.1 is unclear. 1.1.2 The RE Shall serve as the CEA with the following exceptions: 1.1.2.1 For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.</p> <p>Attachment 1 &amp; Criteria Suggestions Attachment 1:</p> <ul style="list-style-type: none"> <li>Paragraph 1.13 was modified from the previous CIP2v4 draft with the objective of clarifying the intent of the SDT to address Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program. This modification in addition to the deletion of the “common control system” terminology resulted in confusion surrounding the applicability of the 1.13 criteria to discrete relays whose sum may exceed 300MW. During the NERC Webinar on December 6, 2010, Howard Gugel clarified that the intent of the 1.13 criteria was NOT to include these discrete relays. To prevent any confusion when auditing to this standard, the intent should be clear within the standard itself and reinforced by supporting guideline documents.</li> </ul> <p>Suggested change to Attachment 1 paragraph 1.13:                      Each common control system or Facility that performs automatic load shedding, without human operator initiation, of 300MW or more implementing Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program.</p> <p>Alternate Suggested change to Attachment 1 paragraph 1.13:                      Each system or Facility that performs automatic load shedding, without human operator initiation, of 300 MW or more implementing Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program. This criterion is not intended to include systems where the 300 MW</p>

Balloter	Company	Segment	Vote	Comment
				<p>or more threshold is met by an aggregate of discrete UF relayed distribution circuits.</p>
<p><b>Response:</b> Thank you for your comments. The Compliance Monitoring Process language has been developed by NERC legal staff for use in all standards being developed. Criterion 1.13 - A discrete component that sheds more than 300MW of load due to the implementation of Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program is a Critical Asset. During the previous ballot and comment period, the SDT received many comments on this criterion. Some commenters stated that the previous wording of this criterion would inadvertently bring in all SCADA systems with the capability of shedding load even if such SCADA systems are in fact not planned or operated to perform load shedding. This was not the intent of the SDT. Other commenters stated that this item needs to be clarified to confirm that it applies to a single common control system only, and not multiple but separate “like” systems that in aggregate are capable of load shedding up to 300 MW. Also, the criterion needs to be clarified to confirm that it applies to systems “configured” for automatic load shedding, not simply just “capable” of load shedding. This criterion was intended by the SDT to include as Critical Assets regional Under Frequency Load Shedding and Under Voltage Load Shedding schemes. The SDT appreciates the suggested wording, but believes the posted wording is adequate.</p>				
Martyn Turner	Lower Colorado River Authority	1	Affirmative	<p>For CIP-002-4 Attachment 1, item 1.13 it should modified to read as follows to better clarify the system referred to in the item:                      1.13. Each Protection System or Facility that performs automatic load shedding, without human operator initiation, of 300 MW or more implementing Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program.</p>
<p><b>Response:</b> Thank you for your comments. The SDT appreciates the suggested wording, but believes the posted wording is adequate.</p>				

Balloter	Company	Segment	Vote	Comment
Joe D Petaski	Manitoba Hydro	1	Negative	<p>-We disagree with the removal of R1.2.7 from CIP-002-3. The entities should continue to have the option to add assets which they feel are appropriate. There is no obligation within the language of the standard which requires an entity to identify additional assets. An entity should not be found non-compliant for identifying Critical Assets outside of the Attachment 1 criteria, and should not be found non-compliant for not identifying any additional assets.</p> <p>-It is unclear if the 300MW is shed simultaneously or in blocks over time. The loss of generation or the loss of load are analogous in their reliability impact on the BES, thus criterion 1.13 using a 300 MW threshold seems inconsistent with criterion 1.1 using a 1500 MW threshold.</p> <p>-The thresholds appear arbitrary. No rationale has been provided for their selection.</p> <p>-The 15-minute “real-time” criterion should be applied to all Critical Cyber Assets, not just generation cyber assets.</p>
Greg C. Parent	Manitoba Hydro	3		<p>Implementation Plan Comments:</p> <p>Implementation Plan for Version 4 of Cyber Security Standards -Under the Prerequisite Approval section, the statement “The term Blackstart Resource, used in CIP-002-4 Attachment 1, was submitted for regulatory approval with Project 2006-03 – System Restoration and Blackstart. The definition must be approved before Criteria 1.4 and 1.5 are used to determine Critical Assets for Responsible Entities” only applies to entities under FERC jurisdiction. The terms are approved by the NERC BOT, and are therefore in effect for entities not under FERC jurisdiction, such as Canadian entities.</p>
S N Fernando	Manitoba Hydro	5		<p>Implementation Plan for Newly identified Critical Cyber Assets and Newly Registered Entities – The proposed 18 month timeframe is too short for the industry to meet compliance for a group of new CCAs. Although the existing approved Implementation Plan for Newly</p>

Balloter	Company	Segment	Vote	Comment
Daniel Prowse	Manitoba Hydro	6		<p>Identified Critical Cyber Assets and Newly Registered Entities provides up to 18 months to reach compliance for some requirements under an existing program, the identification of new CCAs would distributed over time, both throughout the entity and throughout the industry.</p> <p>This new CIP-002-4 compliance date could cause a sudden increase in the number of new CCAs throughout the industry, which may not have the resources to meet this sudden compliance burden. Some consideration should be given to the types of environments and their unique challenges when establishing compliance dates.</p>
<p><b>Response:</b> Thank you for your comments</p> <p>Originally criterion 1.16 was placed in Attachment 1 to provide Responsible Entities the flexibility to include addition items on their existing Critical Asset list that did not meet any other criterion in Attachment 1. Many commenters stated that this was contrary to providing a bright line for Critical Asset identification, with which the SDT agrees. In addition, it has the potential of causing issues in compliance audits. The SDT was concerned that having additional Critical Assets without criteria opens the possibility of having the burden of proof on the Registered Entity that they have no additional Critical Assets. The NERC compliance and auditing process does not prohibit an entity from applying the requirements of CIP-003 to CIP-009 to any Cyber Assets.</p> <p>A single discrete component that sheds more than 300MW of load due to the implementation of Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program is a Critical Asset. It is a sum of all of the blocks of load that can be shed by a single discrete component.</p> <p>The posted Guidance document has been modified to add reasoning for the threshold level. The SDT and volunteer industry participants have expended considerable effort to develop consistent Critical Asset Identification approaches. The team endeavored to include work already required by other standards, and provide some constraints for an entity's assessment. These approaches, in their various iterations, have been presented to industry for review and comment. The industry provided significant feedback for the need to simplify the Critical Asset identification approach. The Attachment 1 criteria were under development for CIP-010 when the team was asked to use the criteria for the basis of a new CIP Version 4 set of standards. The results of the recent NERC data request were used to assist the team in developing the criteria in Attachment 1.</p> <p>The 15-minute threshold is intended to include only those assets at generating units affecting real-time operations. This qualifier is particularly important to a generating plant because several systems (i.e. a fuel-handling system) may be essential after a longer period of time but do not necessarily involve real-time reliability impact.</p> <p>The Implementation Plan for Version 4 has been modified to clarify that the Effective Date of EOP-005-2 is the date that criteria 1.4 and 1.5 will be used to determine Critical Assets for any Responsible Entity.</p> <p>The Effective Date was updated prior to the ballot posting for CIP-002-4 through CIP-009-4 to "The first day of the eighth calendar quarter after applicable regulatory approvals have been received (or the Reliability Standard otherwise becomes effective the first day of the ninth calendar quarter after BOT adoption in those jurisdictions where regulatory approval is not required)." The SDT believes there is precedent showing this implementation period is reasonable. The Responsible Entity has a minimum of 2 years to become compliant with new Critical Cyber Assets. This period is consistent with</p>				

Balloter	Company	Segment	Vote	Comment
the implementation plan for version 1 of the CIP Cyber Security Standards and the implementation plan for Registered Entities identifying their first Critical Cyber Asset.				
Randi Woodward	Minnesota Power, Inc.	1	Negative	Minnesota Power believes that CIP-002-4 R1 needs to clearly state “The RE should identify a list of Critical Asset that it owns...” While the Standard Drafting Team did speak to this in its response to the California ISO’s comments, the SDT did not go far enough to eliminate potential interpretation issues in the future. Specifically, there is ambiguity as to what this would mean from a Balancing Authority perspective. The “its assets” language as written could be interpreted to mean the assets it controls, rather than those assets it owns. As such, we would urge the Standard Drafting Team to reconsider, and include a stronger ownership statement in the proposed Standard language.
<b>Response:</b> Thank you for your comment. The drafting team believes the phrase “a list of its identified Critical Assets” in R1 specifies ownership of the Critical Asset by the Responsible Entity.				
Richard Burt	Minnkota Power Coop. Inc.	1	Negative	See comments submitted by NSRS
<b>Response:</b> Thank you for your comments.				
James McMorran	Nevada Power Co.	1	Negative	This draft requires more work before it is affirmed. Specifically it does not define the term, “Control Generation”. The standard needs to be clear whether this means the control rooms that house the distributed control systems, turbine controls, boiler controls, etc., or the facilities that provide loading instructions (which in some cases could be a Merchant function), or the traditional grid control center that may have AGC functions and issue reactive power instructions to the generating plant. Editing is required to exclude black start units in systems that are inconsequential to the Interconnection. We assume entities should not be required to declare that generator, cranking path AND its control center all to be Critical Assets if they are inconsequential to the Interconnection. We disagree with the idea that all black start units are Critical Infrastructure no matter what the impact on the Interconnection is. Some are not Critical Infrastructure.
<b>Response:</b> Thank you for your comments.  Attachment 1 criteria refer to control centers which control generation. The guidance document provides additional clarity that “control centers generally perform control center functions for multiple BES assets. These Facilities are evaluated as a control center. Facilities that perform control center functions for only a single BES asset should be evaluated as part of the BES asset (e.g., control room for a single generation plant or transmission substation).”				

Balloter	Company	Segment	Vote	Comment
<p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p>				
Rich Salgo	Sierra Pacific Power Co.	1	Negative	<p>While the drafting team has done a commendable job on the latest draft, there remain several provisions that cause this "negative" vote: The language in the Attachment 1 concerning control centers now links the inclusion of a control center if it in any way controls a black start generator. We believe that this over-reaches and may include control centers or control rooms that would otherwise have no consequence to the reliability of the BES. There is lack of specificity about what it means to "control generation". It is still unclear whether this means the control rooms that house the distributed control systems, turbine controls, boiler controls, etc., or the facilities that provide loading instructions (which in some cases could be a Merchant function), or the traditional grid control center that has AGC functions and issues reactive power instructions to the generating plant. We still maintain that not all black start units that are mentioned in a TOP's restoration plan rise to the level of "Critical". Perhaps only the primary black start resource should be included. This is a disincentive for entities to establish multiple (and hence, more reliable) means to black start their systems.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>Attachment 1 criteria refer to control centers which control generation. The guidance document provides additional clarity that "control centers generally perform control center functions for multiple BES assets. These Facilities are evaluated as a control center. Facilities that perform control center functions for only a single BES asset should be evaluated as part of the BES asset (e.g., control room for a single generation plant or transmission substation)."</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p> <p>The SDT considered using the word "primary", but ultimately rejected it as it is not a defined NERC Glossary term in this instance, nor is it used in EOP-005-2.</p>				
Frank F. Afranji	Portland General Electric Co.	1	Affirmative	PGE will submit comments through the separate simultaneous comment opportunity.
<p><b>Response:</b> Thank you for your comment.</p>				
Brenda L	PPL Electric	1	Affirmative	PPL Electric Utilities Corporation ("PPL EU") has separately submitted comments.

Balloter	Company	Segment	Vote	Comment
Truhe	Utilities Corp.			
<b>Response:</b> Thank you for your comment.				
Pawel Krupa	Seattle City Light	1	Affirmative	<p>Seattle City Light supports the Standard Drafting Team’s proposed changes for the successive ballot of CIP-002-4 because it provides greater precision to the identification of those Critical Assets essential to the reliability to the bulk power system. Seattle City Light commends the changes made in the successive ballot text of Appendix A to address City Light’s previous comments about Critical Asset Criteria 1.13 and 1.15. Nevertheless, the revised proposed Standard continues to contain imperfections with the language that may frustrate its promise of bringing greater certainty and consistency. Imprecise language has been a recurring problem all throughout the short life of the NERC Mandatory Reliability Standards. Unnecessary compliance difficulties, tortured interpretations, and wasteful efforts have resulted. Lack of care with language threatens the existing regulatory regime by fostering distrust among industry, regulators, government, and the public at large. As such, Seattle City Light provides the following comments in the hope that the language yet will be clarified:</p> <p>1. Requirement 2 of proposed CIP-002-4 states, “For each group of generating units (including Nuclear generation) at a single plant location identified in Attachment 1, criterion 1.1, the only Cyber Assets that must be considered are those shared Cyber Assets that could, within 15 minutes, adversely impact the reliable operation of any combination of units that in aggregate exceed Attachment 1, criterion 1.1.”</p> <p>As previously commented, Seattle City Light finds the term ‘shared Cyber Assets’ unclear and suggests clarification as follows:</p>
Dana Wheelock	Seattle City Light	3		

Balloter	Company	Segment	Vote	Comment
Hao Li	Seattle City Light	4		<p>“For each group of generating units (including Nuclear generation) at a single plant location identified in Attachment 1, criterion 1.1, the only Cyber Assets that must be considered are those shared Cyber Assets networked to a system that could, within 15 minutes, adversely impact the reliable operation of any combination of units that in aggregate exceed Attachment 1, criterion 1.1.”</p> <p>2. Section D, Item 1, is numbered “1.1 Compliance Enforcement Authority, 1.2 The RE shall..., 1.3 Compliance Monitoring and Enforcement Process, 1.4 Data Retention, and 1.5 Additional Compliance Information.”</p> <p>Seattle City Light believes existing point 1.2 is intended to be subordinate to point 1.1, and thus should be renumbered 1.1.1, and the remainder of points renumbered as appropriate. This change will result in further renumbering to the subpoints now listed under 1.2 as 1.2.1, 1.2.2, etc, but Seattle City Light is not certain if these subpoints should be subordinate to new 1.1.1 or if they should be equal to new 1.1.1.</p>
Michael J. Haynes	Seattle City Light	5		<p>3. Critical Asset criterion 1.7 of CIP-002-4, Appendix A, identifies as Critical Assets “Transmission facilities operated at 300 kV or higher at stations interconnected at 300 kV or higher with three or more other transmission stations.”</p> <p>As previously commented, Seattle City Light believes additional detail is needed about the nature of the specified interconnections. In particular, questions exist as to type (what about a radial line connected to a generator—does it count?) and distance (does a high-voltage bus count if connected to another substation a dozen feet away?).</p> <p>4. Critical Asset criterion 1.13, as revised for the successive ballot, now identifies as Critical Assets “Each system or Facility that performs automatic load shedding, without human operator intervention, of 300 MW or more implementing Under Voltage Load Shedding ((UVLS) or Under Frequency Load Shedding (UFLS)) as required by the regional load shedding program.”</p> <p>Seattle City Light appreciates the clarification to exclude non-material SCADA systems from this criterion but it is not certain what precisely the Standard Drafting Team means by the revised text beginning with “...implementing Under Voltage...” and recommends clarification.</p>

Balloter	Company	Segment	Vote	Comment
				<p>5. Critical Asset criterion 1.15 states “Each control center or backup control center used to control generation at multiple plant locations, for any generation Facility or group of generation Facilities identified in criteria 1.1, 1.3, or 1.4. Each Control Center or backup control center used to control generation equal to or exceeding 1500 MW in a single Interconnection.”</p> <p>Seattle City Light is concerned about confusion in both applying and auditing what properly are two independent criteria presented together as a single criterion.</p> <p>Seattle City Light recommends separation of this criterion into two criteria, as follows:  “1.15. Each control center or backup control center used to control generation at multiple plant locations, for any generation Facility or group of generation Facilities identified in criteria 1.1, 1.3, or 1.4.” and “1.18. Each Control Center or backup control center used to control generation equal to or exceeding 1500 MW in a single Interconnection.”</p> <p>6. Critical Asset criterion 1.1.7 states “Each control center or backup control center used to perform the functional obligations of the Balancing Authority that includes at least one asset identified in criteria 1.1, 1.3, 1.4, or 1.13. Each control center or backup control center used to perform the functional obligations of the Balancing Authority for generation equal to or greater than the aggregate of 1500 MW in a single Interconnection.”</p> <p>Seattle City Light is concerned about confusion in both applying and auditing what properly are two independent criteria presented together as a single criterion. Seattle City Light recommends separation of this criterion into two criteria, as follows:  “1.17. “Each control center or backup control center used to perform the functional obligations of the Balancing Authority that includes at least one asset identified in criteria 1.1, 1.3, 1.4, or 1.13.” and “1.19. Each control center or backup control center used to perform the functional obligations of the Balancing Authority for generation equal to or greater than the aggregate of 1500 MW in a single Interconnection.”</p>
<p><b>Response:</b> Thank you for your comments.</p> <ol style="list-style-type: none"> <li>1. The SDT appreciates the suggestion, but believes the posted wording is sufficient.</li> <li>2. The SDT agrees and has incorporated the change.</li> <li>3. The SDT believes there is sufficient detail about this in the posted Guidance document.</li> <li>4. In the drafting of this criterion, the drafting team sought to include only those systems that did not require human operator initiation, and</li> </ol>				

Balloter	Company	Segment	Vote	Comment
<p>targeted in particular those Under Frequency Load Shedding (UFLS) facilities and systems and Under Voltage Load Shedding (UVLS) facilities and systems that would be implemented as part of a regional load shedding requirement to prevent Adverse Reliability Impact.</p> <p>5. The SDT decided to group the criteria for control centers based on functionality. Separating them does not appear to add any additional clarity to the criteria.</p> <p>6. The SDT decided to group the criteria for control centers based on functionality. Separating them does not appear to add any additional clarity to the criteria.</p>				
Horace Stephen Williamson	Southern Company Services, Inc.	1	Affirmative	Southern believes that the SDT’s changes to the proposed standard were responsive to some of the feedback received; however, certain key industry comments still have not been adequately addressed.
Richard J. Mandes	Alabama Power Company	3		<p>For example, in Attachment 1, Section 1.11 should be deleted.</p> <p>Section 1.11 relates to Transmission Facilities necessary to secure offsite power to permit safe reactor shutdown. Although such Transmission Facilities are within the scope of Nuclear Plant Interface Coordination standards (NUC reliability standards), they are not within the intended scope of the Cyber Security standards (CIP reliability standards). The Purpose section of the NUC reliability standards states “This standard requires coordination between Nuclear Plant Generator Operators and Transmission Entities for the purpose of ensuring nuclear plant safe operation and shutdown.” The Purpose section of the CIP reliability standards states “NERC Standards CIP-002-4 through CIP-009-4 provide a cyber security framework for the identification and protection of Critical Cyber Assets to support reliable operation of the Bulk Electric System.” Therefore, Section 1.11 should be deleted because it is clearly out of scope.</p> <p>Moreover, the criticality of facilities for BES reliability purposes should not be based on fuel type alone.</p>
Anthony L Wilson	Georgia Power Company	3		
Don Horsley	Mississippi Power	3		<p>In addition, Southern believes the following proposed changes made by the SDT should be reconsidered:</p> <p>In Attachment 1, Section 1.10, the SDT deleted the word “directly” by changing “generation interconnection required to directly connect generator output” to “generation interconnection required to connect generator output.”</p> <p>The word “directly” should not be deleted from Section 1.10 because it is necessary to appropriately define the scope of the requirement. Removing the word “directly”</p>

Balloter	Company	Segment	Vote	Comment
				<p>removes the bright line criteria, which is the goal of the new standard. As proposed by the SDT, the standard would require various risk-based analyses i.e. load flow and transient stability studies to determine the assets in scope. Therefore, the SDT should reconsider this proposed change.</p> <p>The proposed Section 1.13 would be clearer if it were changed to the following:                      “1.13. Each system or facility that implements Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) of 300 MW or more without human operator initiation as required by the regional load shedding program.”</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>Criterion 1.11 – This criterion is based on NUC-001-2 R9.2.2 “Identification of facilities, components, and configuration restrictions that are essential for meeting the NPIRs.” Since these facilities were deemed so important that a NERC reliability standard was written and adopted to clarify the issue, the SDT determined that this was adequate justification to include them as Critical Assets. While the purpose of NUC-001-2 states “This standard requires coordination between Nuclear Plant Generator Operators and Transmission Entities for the purpose of ensuring nuclear plant safe operation and shutdown,” it is a NERC reliability standard and as such helps to ensure the reliability of the Bulk Electric System.</p> <p>Criterion 1.10 - Several commenters in the first posting were concerned about the use of the term “directly.” After consideration by the Standard Drafting Team, it was determined that the term could be removed without affecting the intent of the criterion.</p> <p>Criterion 1.13 - The SDT appreciates the suggestion, but believes the posted wording is adequate.</p>				
James L. Jones	Southwest Transmission Cooperative, Inc.	1	Affirmative	The current draft of CIP 2-4 as a definite improvement over the existing CIP 2-3. It comes down to whether the failure to approve CIP-004-2 will ultimately result in more onerous CIP requirements in the future.
<p><b>Response:</b> Thank you for your comment.</p>				
John Tolo	Tucson Electric Power Co.	1	Negative	We feel that the CIP-002-4 is overly prescriptive and does not provide a technical justification for moving away from the Reliability Based Risk Assessment Methodology(RBAM). Our opinion is the the current RBAM is a logical, reasonable, and reliable way to determine critical assets rather than a more arbitrary, "bright line" threshold contained in the proposed Requirements.

Balloter	Company	Segment	Vote	Comment
				We have no issues with the changes to the other Version 4 CIP Standards regarding Nuclear facilities.
<p><b>Response:</b> Thank you for your comment. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method.</p>				
Brandy A Dunn	Western Area Power Administration	1	Negative	<p>With regard to identifying Critical Assets, Attachment 1 of the proposed CIP-002-4 standard is a step forward because it removes much of the ambiguity which existed under the three previous versions of the CIP standards. However, with regard to identifying Critical Cyber Assets, the proposed CIP-002-4 standard is a step backward because it increases ambiguity. It will lead to more rather than less confusion as to what is, and what is not, a Critical Cyber Asset. The "WECC Position Paper for the ballot of Project 2008-6" states, "...the failure to provide similar bright line criteria for identifying Critical Cyber Assets makes the current version unacceptable." The situation is actually worse than what the WECC states. Not only does the proposed standard fail to provide bright line criteria for identifying Critical Cyber Assets, it removes the following language which existed in previous versions of the CIP standards:</p> <p style="padding-left: 40px;">"Examples at control centers and backup control centers include systems and facilities at master and remote sites that provide monitoring and control, automatic generation control, real-time power system modeling, and real-time inter-utility data exchange."</p> <p>The language which was removed, is the language which UGP relied on when developing its Critical Cyber Asset identification methodology. Removal of this language, removes the foundation for our Critical Cyber Asset identification methodology. The proposed standard for identifying Critical Cyber Assets is less prescriptive than the existing standard. It is moving in the wrong direction.</p>
<p><b>Response:</b> Thank you for your comment. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. Similar language to that referred to can be found in the guidance document. Example language is ambiguous and therefore was removed from the standard.</p>				
Chuck B Manning	Electric Reliability Council of Texas, Inc.	2	Negative	ERCOT ISO has joined in the submission of the IRC SRC comments. Please see IRC SRC submission for details.

Balloter	Company	Segment	Vote	Comment
<b>Response:</b> Thank you for your comment.				
Charles H Yeung	Southwest Power Pool	2	Negative	We believe the bright line criteria proposed goes beyond what is required for protecting the bulk power system from cyber attack. We reiterate our support for the ISO RTO Council SRC comments submitted in the comment period.
<b>Response:</b> Thank you for your comment.				
Kim Warren	Independent Electricity System Operator	2	Negative	<p>We appreciate the Drafting Team’s reinstatement of Section 4.2.1 pertaining to the exemption of facilities regulated by the CNSC.</p> <p>We however respectfully reiterate our objection to criteria 1.6 and 1.7. In our view, removal of some of the facilities identified as Critical Assets using these criteria will have no impact on the BES. Their inclusion on the Critical Assets list would therefore be unnecessary. The Drafting Team’s response to our comment was “The inclusion of a risk-based evaluation by any entity would not meet the objective of uniform application of Critical Asset identification across all entities.” We must however point out that Criteria 1.3, 1.8 and 1.9 already allow entities (whether they be the RC, the PC etc.) the discretion to designate/identify as Critical Assets, facilities “necessary to avoid BES Adverse Reliability Impacts” or “critical to the derivation of IROLs”. Presumably, these entities doing the “designating” will have a documented methodology and apply it. We therefore advocate a similar approach in the case of Criteria 1.6 and 1.7. We believe the list of relevant transmission facilities developed by the Responsible Entity, should be subject to an impact-based assessment by the Reliability Coordinator who has the wide-area view of the system. If necessary, an additional requirement that requires the RC to have a risk-based assessment methodology and to conduct the assessment should be included. Such an arrangement would be akin to the exemption provisions advocated by FERC in its Final Rule on Revisions to the ERO definition of Bulk Electric System. We therefore propose the following specific wording:</p> <p style="padding-left: 40px;">1.6 Transmission facilities operated at 500 kV or higher, unless the annual review performed by the Reliability Coordinator (new requirement) demonstrates that destruction, degradation or unavailability of those assets will have no impact outside the local area and will not cause BES instability, separation, or cascading outages.</p>

Balloter	Company	Segment	Vote	Comment
				<p>1.7 Transmission facilities operated at 300 kV or higher at stations interconnected at 300 kV or higher with three or more other transmission stations, unless the annual review performed by the Reliability Coordinator (new requirement) demonstrates that destruction, degradation or unavailability of those assets will have no impact outside the local area and will not cause BES instability, separation, or cascading outages.</p>
<p><b>Response:</b> Thank you for your comment. The SDT considered placing various analysis requirements on the Reliability Coordinator. The Functional Model describes the Reliability Coordinator as “The functional entity that maintains the Real-time operating reliability of the Bulk Electric System within a Reliability Coordinator Area.” However, the nature of the Critical Asset list is long-term, since implementation of CIP-003 to CIP-009 is up to two years. Based on this, it was determined that the Reliability Coordinator was not an appropriate entity for this analysis.</p>				
Kathleen Goodman	ISO New England, Inc.	2	Negative	<p>With regard to Criteria 1.3, ISO-NE agrees with and appreciates the Standard Drafting Team’s (SDT) clarification that: “the burden for identifying Critical Assets is with the Responsibility Entity that is the Asset Owner. There is no burden or obligation placed on the Planning Coordinator or Transmission Planner to designate any unit as needed for reliability.” (emphases added). To the extent that the Standard Drafting Team continues to leave this type of language in as Criteria 1.3, ISO-NE believes that such explanation should accompany any explanation of the Standard to NERC management/Board and/or FERC to ensure that there is no confusion on this point. ISO-NE continues to believe, however, that Criterion 1.3 should be removed. Because Attachment 1 establishes “bright-line” criteria for what assets should be included as “critical” assets under the Standard, for the reasons previously submitted to the Standard Drafting Team, including a Criterion in the Standard that places the task of making a “criticality” determination on an entity that does not own the assets violates FERC’s Order 706 (and its Orders on Rehearing). As previously explained in submitted comments on this Standard, oversight from third parties (such as NERC, or its designee, if NERC so chooses) can be handled through the Rules of Procedure, where liability protections can be properly defined. In this case, of course,</p>

Balloter	Company	Segment	Vote	Comment
				<p>NERC’s designee would be entitled to the same liability protections as NERC. With this new iteration of Criteria 1.3, ISO-NE requests its removal, because: (a) it establishes a subjective method not included in other TPL Standards for Planning Coordinator/Transmission Planner (PC/TP) making a determination about generation assets; (b) as FERC has previously stated, PC/TP have no special expertise in identifying which assets are needed to protect as Critical Infrastructure from a cyber-security perspective; and (c) the inclusion of this Criteria may disincentivize generation owners/operators from conducting their own independent analysis – in that they will implicitly rely on whether the PC/TP has informed them of such a designation. Alternatively, such asset owners may simply unilaterally request that their PC/TP make such a designation. In short, the SDT and FERC have recognized the sole responsibility for identifying critical assets rests with the asset owner. As FERC clearly laid out in Order 706 (and its Orders on rehearing), NERC should provide some type of oversight to check that analysis (or designate another type of entity if it is not capable of doing so). Because Criteria 1.3 does not establish “bright-line” criteria for inclusion of bulk power system assets, it should be removed.</p>
<p><b>Response:</b> Thank you for your comment.</p>				
<p>If it is determined through system studies that a unit must run in order to preserve the reliability of the BES, such as due to a category C3 contingency as defined in TPL-003 or a category D contingency as defined in TPL-004, then that unit must be classified as a Critical Asset.</p>				
Jason L Marshall	Midwest ISO, Inc.	2	Negative	<p>We thank the drafting team for their efforts and the progress they have made in improving this standard since the last ballot. However, we still believe there are significant issues with the standard. The standard shifts responsibility for critical asset identification to third parties. For example, criterion 1.3 essentially causes generation owners to rely on Planning Coordinators to identify their critical generators. This responsibility should not be transferred and Order 706 was clear that it cannot be in paragraph 328. Criterion 1.3 is ambiguous and likely will not result in any generators being identified unless the Planning Coordinator is violating the TPL standards. Adverse Reliability Impact involves impacts to the system that cause separation, cascading, instability, etc. The TPL standards require the Planning Coordinator to plan to prevent these kinds of events for multiple contingencies. Thus, this criterion should be removed.</p>
<p><b>Response:</b> Thank you for your comment.</p>				
<p>Criterion 1.3 - The burden for identifying Critical Assets is with the Responsible Entity that is the asset owner. If it is determined through system studies that a unit must run in order to preserve the reliability of the BES, such as due to a category C3 contingency as defined in TPL-003 or a category D</p>				

Balloter	Company	Segment	Vote	Comment
contingency as defined in TPL-004, then that unit must be classified as a Critical Asset.				
Bruce Krawczyk	ComEd	3	Affirmative	<p>1. When reviewing the changes to the proposed CIP-002-4 standard, do you believe that the proposed standard was responsive to feedback received and provides acceptable bright-line criteria for the determination of Critical Cyber Assets? No Comments:</p> <p>Exelon concurs that the changes made to the CIP-002-4 draft are responsive to the feedback received; however, the current draft version of CIP-002-4 does not address a technical issue previously not identified, and Exelon proposes a modification to the CIP-002-4 language. The current proposed exemption criteria in the "Applicability" Section 4.2.3 states that, "Cyber Assets associated with Cyber Security Plans submitted to and verified by the U.S. Nuclear Regulatory Commission pursuant to 10 C.F.R. Section 73.54." The wording of the exemption, and the parenthetical information in critical asset criteria 1.1 in Att. 1 (i.e., "including nuclear generation") appear to leave in place the requirement for nuclear generators to comply with Requirement 1, the annual determination of critical assets. Exelon understands that this exemption wording was put in place prior to the NRC letters to both FERC and NERC dated November 26, 2010, that by a matter of policy reserved to NRC the cyber security oversight of the BOP structures, systems, and components (SSCs) with impact on radiological health and safety. Because of the close coupling between electrical power and nuclear power, this regulatory oversight by the NRC would result in no BOP SSCs within the NERC CIP Standards. Thus, restricting the wording of the exemption to cyber assets is unnecessary. Exelon suggests that this technical issue can be resolved by revising the wording of exemption 4.2.3 to mirror that of 4.2.1 for Canadian nuclear generators (i.e., revise to state "4.2.3 Facilities regulated by the U.S. Nuclear Regulatory Commission"). The parenthetical "including nuclear generation" may also be removed from critical asset criteria 1.1 in Att. 1 of the draft standard. It is Exelon's understanding that the current May 2010 version of the NERC Standard Process Manual, pp. 17-18, allows the draft CIP-002-4 wording to be changed to correct such technical issues without need for re-balloting.</p>
<p><b>Response:</b> Thank you for your comments. The phrase "including nuclear generation" in Criterion 1.1 is there to define a plant site. Unit output from all units at a single plant site should be included to determine if a plant meets the 1500MW threshold. The evaluation for Critical Cyber Assets is similar. Although it is highly unlikely that nuclear and</p>				

Balloter	Company	Segment	Vote	Comment
<p>non-nuclear units share common Cyber Assets, the evaluation should still occur. The Applicability language serves to ensure that all reliability systems not covered by the NRC will be covered by the CIP standards. The Applicability section has been revised to clarify the nuclear plan exemption.</p>				
David A. Lapinski	Consumers Energy	3	Negative	<p>The revised wording in CIP-002-4, Attachment 1 has not changed adequately to address the ambiguity that we had objected to in our previous comments and negative vote. It would seem that the changes have not done enough to limit inclusion of many more generating units that are part of alternate cranking paths. As this creates ambiguity, the Standard is not acceptable as proposed.</p> <p>In addition, Item 1.5 has not changed in a definitive fashion such as to limit inclusion of only the 'Primary Path", which was the same concern we raised previously.</p>
David Frank Ronk	Consumers Energy	4		
James B Lewis	Consumers Energy	5		
<p><b>Response:</b> Thank you for your comments. The SDT considered using the word "primary", but ultimately rejected it as it is not a defined NERC Glossary term in this instance, nor is it used in EOP-005-2.</p>				
Henry Ernst-Jr	Duke Energy Carolina	3	Affirmative	<p>Yes, however we see much room for improvement and offer the following comments:</p> <ul style="list-style-type: none"> <li>• Criterion 1.2 – We previously commented that 1000 MVAR was too large, and reiterate that comment again. There are not any reactive resources that large in SERC. Is the drafting team aware of where any 1000 MVAR resources are located?</li> <li>• Criterion 1.3 – This criterion is less clear than before. Adding the phrase "necessary to avoid BES Adverse Reliability Impacts" potentially broadened this criterion to include every last generator on the system, because the defined term "Adverse Reliability Impact" includes tripping of generation. You need to limit this criterion to generation whose loss "could expose a widespread area of the Bulk Electric System to instability, uncontrolled separation(s) or cascading outages."</li> <li>• Criterion 1.4 - Need to clarify that this criterion only includes the primary Blackstart Resources. Entities may include various alternative resources in their restoration plans which aren't Critical Assets, but which may not be clearly distinguished from the primary Blackstart Resources in the restoration plan. Add the phrase "that the entity intends to rely on for system restoration".</li> </ul>

Balloter	Company	Segment	Vote	Comment
				<ul style="list-style-type: none"> <li>• Criterion 1.7 – Wording change creates confusion as to whether generating stations are included. Insert the word “transmission” before the word “stations”.</li>   <li>• Criterion 1.8 – This criterion is less clear than before. Delete the RC, because the identification of facilities to be protected occurs in the planning timeframe. Also the unclear language “critical to the derivation of” and “their associated contingencies” should be struck. Suggested rewording: “Transmission Facilities at a single transmission station or substation location, that are identified by the Planning Authority or Transmission Planner, whose loss could expose a widespread area of the Bulk Electric System to instability, uncontrolled separation(s) or cascading outages.”</li>   <li>• Criterion 1.9 - This criterion is less clear than before. Delete the RC, because the identification of facilities to be protected occurs in the planning timeframe. Also the unclear language “critical to the derivation of” and “their associated contingencies” should be struck. Suggested rewording: “Flexible AC Transmission Systems (FACTS) at a single transmission station or substation location, that are identified by the Planning Authority or Transmission Planner, whose loss could expose a widespread area of the Bulk Electric System to instability, uncontrolled separation(s) or cascading outages.”</li>   <li>• Criterion 1.10 – Removing the word “directly” creates significant uncertainty regarding what scope of facilities would be included. Reinsert the word “directly”, preferably after the phrase “Transmission Facilities”. Also, including the word “destroyed” in the phrase “destroyed, degraded, misused or otherwise rendered unavailable” creates significant uncertainty regarding what is intended. Add the phrase “via cyber attack” after the word “unavailable”. This will clarify that the evaluation only encompasses destruction, degradation or misuse that can be achieved via cyber attack, and not a physical attack on the facilities.</li>   <li>• Criterion 1.12 – The added language is unclear. Suggested rewording: “Each Special Protection System (SPS), Remedial Action Scheme (RAS) or automated switching system that operates BES Elements whose loss could expose a widespread area of the Bulk Electric System to instability, uncontrolled separation(s) or cascading outages for failure to operate as designed.”</li> </ul>

Balloter	Company	Segment	Vote	Comment
				<ul style="list-style-type: none"> <li>• Criterion 1.13 – As clarified on the Webinar, the language needs to be revised to clarify that the phrase “Each system or Facility” only includes discrete systems or facilities that can individually shed 300 MW or more of load. UFLS and UVLS systems are typically composed of discrete components at many locations (not interconnected), usually on the distribution system. These discrete, localized facilities would not typically interrupt 300 MW individually.</li> <li>• While the Implementation Plan for Newly Identified Critical Cyber Assets and Newly Registered Entities provides milestones for implementing the CIP standards, we believe that a modification is needed related to the CIP 002 milestones within this plan. The implementation plan presumes that compilation of all of CIP 002 evidence (R1. Application of Methodology; R2. Identification of the new Critical Asset; R3. Identification of the new Critical Cyber Assets; and R4. Annual Approval of the above items) occurs simultaneously for Category 1 and Category 2. This approach does not allow sufficient time for the identification of new Critical Cyber Assets (R3) and approval of the documented CCA list (R4) once new Critical Assets are identified. We believe the Implementation Plan for Newly Identified Critical Cyber Assets and Newly Registered Entities should be amended to provide a period of 6 months following identification of a new Critical Asset for the identification of new Critical Cyber Assts associated with the new Critical Asset (R3) and the Annual Approval of the revised Critical Cyber Asset List (R4).</li> </ul>
<p><b>Response:</b> Thank you for your comments.</p> <p>Criterion 1.2 - The value of 1000 MVAR used in this criterion is a value deemed reasonable for the purpose of determining criticality. The survey that NERC conducted earlier this year showed that there were facilities that would qualify at this threshold.</p> <p>Criterion 1.3 – Adverse Reliability Impact is defined as “The impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.” The Guidance document has been modified to provide additional clarification on this issue.</p> <p>Criterion 1.4 - The SDT considered using the word “primary”, but ultimately rejected it as it is not a defined NERC Glossary term in this instance, nor is it used in EOP-005-2. The phrase “that the entity intends to rely on for system restoration” was discussed by the SDT, but it was determined that it added no additional clarity.</p> <p>Criterion 1.7 - The choice of the phrases “Transmission Facilities” and “transmission stations or substations” was intentional to exclude connections and generation only substations.</p> <p>Criterion 1.8 - According to FAC-014-2 Requirement R1 “The Reliability Coordinator shall 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</p>				

Balloter	Company	Segment	Vote	Comment
<p>with its SOL Methodology.” Since they have a responsibility to ensure that the IROLs are established and consistent with their SOL methodology, it is valid to list them in this Criterion. The wording for criterion 1.8 came from FAC-014-2 Requirement R5.</p> <p>Criterion 1.9 - According to FAC-014-2 Requirement R1 “The Reliability Coordinator shall 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 Methodology.” Since they have a responsibility to ensure that the IROLs are established and consistent with their SOL methodology, it is valid to list them in this Criterion. The wording for criterion 1.8 came from FAC-014-2 Requirement R5.</p> <p>Criterion 1.10 - Several commenters in the first posting were concerned about the use of the term “directly.” After consideration by the Standard Drafting Team, it was determined that the term could be removed without affecting the intent of the criterion. The SDT discussed your suggested changes, and determined the existing language is adequate. The term “destroyed” is listed in the definition of Critical Asset.</p> <p>Criterion 1.12 - The SDT appreciates the suggestion, but believes the posted wording is adequate.</p> <p>Criterion 1.13 - The SDT spent considerable time discussing the wording of criterion 1.13, and chose the term “Each” to represent that the criterion applied to a discrete system or Facility.</p> <p>Implementation Plan – Thank you for raising this concern. The SDT will review this implementation plan in the next version and revise as necessary.</p>				
Robert D Adam	Kansas City Board of Public Utilities	3	Affirmative	<p>Consider the changes being proposed in the following language. 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big</p>

Balloter	Company	Segment	Vote	Comment
				<p>iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comments.</p>				
<p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system.</p>				
Bruce Merrill	Lincoln Electric System	3	Negative	<p>LES believes the SDT was responsive to much of the feedback received from the industry; however, we question whether these bright-line criteria as a whole are acceptable for determining Critical Cyber Assets. We believe a few criteria need to be adjusted to provide a proper foundation moving forward, and support the comments submitted by the MRO NERC Standards Review Subcommittee (MRO NSRS) to properly address these issues.</p>
Dennis Florum	Lincoln Electric System	5		
Eric Ruskamp	Lincoln Electric System	6		
<p><b>Response:</b> Thank you for your comments.</p>				

Balloter	Company	Segment	Vote	Comment
Charles A. Freibert	Louisville Gas and Electric Co.	3	Affirmative	<p>PPL affiliates appreciate the hard work and efforts of the Standards Drafting Team in reaching this point in the standards development process. However PPL affiliates have reviewed the CIP-002-4 standard version dated 11/30/2010 and the associated Rationale and Implementation Reference Document and Implementation Plan for Newly Identified Critical Cyber Assets and Newly Registered Entities and still find the need to offer comments as follows:</p> <ol style="list-style-type: none"> <li>1) CIP-002-4, Attachment 1, Criterion 1.1 should include a requirement that the Generator Owner or Generator Operator must inform the Transmission Operator, Transmission Operator, Planning Coordinator or Transmission Planner of each group of generating units that has been designated as a critical asset.</li> <li>2) CIP-002-4, Attachment 1, Criterion 1.3 should be reworded to indicate "Each generation Facility that the Planning Coordinator or Transmission Planner designates and informs the Generator Owner or Generator Operator, "and the Transmission Owner and Transmission Operator" as necessary to avoid BES Adverse Reliability Impacts in the long-term planning horizon.</li> <li>3) CIP-002-4, Attachment 1, Criterion 1.5 should be reworded to indicate "The facilities comprising the Cranking Paths and Meeting the initial switching requirements from the Blackstart Resource "up to and including" the first interconnection point of the generation unit(s) to be started, or up to "and including" the point on the Cranking Path where two or more path options exist "including the first interconnection point of the generation unit(s) to be started" , as identified in the Transmission Operator's restoration plan.</li> <li>4) CIP-002-4, Attachment 1, Criterion 1.13 should be revised to include load shed systems capable of shedding 300 MW or more. These load shed systems, which are typically part of the energy management systems, are initiated to ensure the reliability of the BES.</li> <li>5) CIP-002-4, Attachment 1, Criterion 1.13 should be reworded to indicate that distributed UFLS or UVLS schemes (i.e., individual UF or UV relays operating independently in multiple substations) are not considered to be a critical asset. Collectively the UFLS or UVLS scheme may shed more than 300MW; however, due to the distributed nature of the scheme, the UFLS or UVLS schemes are not considered to be a critical asset.</li> </ol>
<p><b>Response:</b> Thank you for your comments.                      Criterion 1.1 - It is agreed that communication between Generator Operators and Transmission Owners and Transmission Operators will be required to ensure that all Critical Assets are identified.</p>				

Balloter	Company	Segment	Vote	Comment
<p>Criterion 1.3 - The process would be that the Planning Coordinator or Transmission Planner would notify the Generation Owner and Generation Operator about any facilities that meet Criterion 1.3. The GO and/or GOP would need to notify the Transmission Owner of any facilities that need to be considered for Criterion 1.10.</p> <p>Criterion 1.5 - The SDT appreciates the suggestion, but believes the posted wording is adequate.</p> <p>Criterion 1.13 – A discrete component that sheds more than 300MW of load due to the implementation of Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program is a Critical Asset. During the previous ballot and comment period, the SDT received many comments on this criterion, whose wording was similar to this suggestion. Some commenters stated that the wording of this criterion will inadvertently bring in all SCADA systems with the capability of shedding load even if such SCADA systems are in fact not planned or operated to perform load shedding. This was not the intent of the SDT. Other commenters stated that this item needs to be clarified to confirm that it applies to a single common control system only, and not multiple but separate “like” systems that in aggregate are capable of load shedding up to 300 MW. Also, the criterion needs to be clarified to confirm that it applies to systems “configured” for automatic load shedding, not simply just “capable” of load shedding. This criterion was intended to include as Critical Assets regional Under Frequency Load Shedding and Under Voltage Load Shedding schemes. The SDT appreciates the suggestion, but believes the posted wording is correct.</p>				
Darl Shimko	Madison Gas and Electric Co.	3	Abstain	<p>We appreciate the Standard Drafting Teams time and effort in developing this revised Standard and believe substantial progress has been made. However, there are several items that we feel warrant further modifications.</p>
Joseph G. DePoorter	Madison Gas and Electric Co.	4		<p>1.4 Each Blackstart Resource identified in the Transmission Operator's restoration plan. Minor modifications are required for 1.4. As currently drafted, any Blackstart Resource identified in the Transmission Operator's restoration plan would be a Critical Asset without regard to the circumstances of the Blackstart Resource. A modified approach would be to allow the Transmission Operator to have both essential and non-essential resources (resources that meet the CIP bright-line criteria and those that do not meet the CIP bright-line criteria) within their restoration plan. We recommend that Criterion 1.4 be rewritten to state: Each Blackstart Resource identified as being necessary to restore the system in the Transmission Operator's restoration plan. Rationale: By modifying the criterion, the Transmission Owner is able to develop a fully encompassing plan that will allow resources with blackstart capability to be included in the plan, even if that particular resource is not deemed to be essential to the restoration of the system. This would add diversity to the restoration plans, allowing the</p>

Balloter	Company	Segment	Vote	Comment
Steven Schultz	Madison Gas and Electric Co.	5		<p>Transmission Operator to use all the available resources to ensure the reliability of the system during these circumstances. When a Blackstart Resource is included in the plan, it will receive the full attention of the Transmission Operator and will be the focus of training and emergency simulation. Without this modification, it is likely that Blackstart Resources that are not essential, but may be helpful to the restoration plan, will not be included in the plan and therefore will not be a considered during the training and simulation drills. The Transmission Operator will likely be in a better position to respond to the circumstances, which may be unforeseen, if it has included all available resources, not just those deemed critical.</p>
Jeffrey M Keebler	Madison Gas and Electric Co.	6		<p>1.13. Each system or Facility that performs automatic load shedding, without human operator initiation, of 300 MW or more implementing Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program. Clarity is required for 1.13. The owner of a UFLS system is not listed in the applicability section of this Standard which is a Distribution Provider. PRC-008-0 has the Distribution Provider in its applicability section for the maintenance and testing of UFLS relays. Please review and update. This criterion could be interpreted as each relay that is enabled to perform UFLS operations would be considered a CA. These relays are located at distribution substations and may change annually due to the customer make up per distribution feeder. Since a UFLS system is enabled at individual feeder relays, this criterion would require each individual relay to be classified as a CA. When the NERC defined term of "Facility" is in the criterion it will bring in all components of the UFLS system as being a CA. We recommend that Criterion 1.13 be rewritten to state: Each automatic load shedding relay that interrupts, without human operator initiation, 100 MW or more of load as a result of Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program. Rationale: The 300 MW limit is a DOE requirement and is subject to public law outside the authority of NERC. The 100 MW is per FERC approved NERC Standard EOP-004-1. UFLS relays that fall below this threshold will still need to be maintained per PRC-008-0 since there is no bright line associated with that Standard. This recommended revised criterion adds to the adequate level of reliability and does not adversely affect those small entities.</p> <p>1.15 Each control center or backup control center used to control generation at multiple plant</p>

Balloter	Company	Segment	Vote	Comment
				<p>locations, for any generation Facility or group of generation Facilities identified in criteria 1.1, 1.3, or 1.4. Each control center or backup control center used to control generation equal to or exceeding 1500 MW in a single Interconnection Even if a small utility, as a joint owner, has control over only a small portion of a large plant that falls under the brightline of 1.1, we are concerned that as currently written, the first sentence of this criteria would unintentionally designate this small utility’s control center as critical. We would propose rewording the criteria as follows: Each control center or backup control center used to control generation at multiple plant locations, for any generation Facility or group of generation Facilities identified in criteria 1.3 or 1.4, or used to control at least 1500 MW of generation at any Facility identified in criteria 1.1. Each control center or backup control center used to control generation equal to or exceeding 1500 MW in a single Interconnection. Rationale: The important part of this criteria is the amount of generation controllable by the system, the MW level of the entire generation. As written, it could be interpreted that the total generation size at a single plant location is the defining criteria, not what is controllable by the individual system. If a system is only able to control 100 MW of a 2000 MW plant, the Criteria for 1.15 should be looking at the 100 MWs of control capability, not the 2000 MW plant.</p>
<p><b>Response:</b> Thank you for your comments.                      Criterion 1.4 - The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.                      Criterion 1.13 – The SDT does not feel it necessary at this time to include Distribution Providers in the Applicability section but may consider this in future revisions of the Standards. Distribution Providers may own certain very limited BES Cyber Assets, generally limited to UFLS and UVLS relays. However, additional functional entities (i.e. Transmission Operators) generally provide aggregate control of these relays.                      Criterion 1.15 - The concern here is that the smaller utility’s control center could provide a path to compromise the functionality of the generation designated a Critical Asset.</p>				
Rick Keetch	NRG Energy Power Marketing, Inc.	3	Negative	<p>The revision to CIP002 V4 Section 1.15 in Attachment 1 still requires additional clarification. The requirement states that if a facility has the ability to control generation at multiple locations, it is designated as a control center and therefore is deemed critical under this requirement. However, a single entity that has generation may have a control room that controls remote sites from a single location (ex. Gas turbines). If the intent is to pull in these assets under the classification of control center, it should clearly state that control rooms having this configuration are in scope or redefine the control center definition based upon application of this methodology.</p>
Richard Comeaux	LaGen	4		

Balloter	Company	Segment	Vote	Comment
Patricia A. Lynch	NRG Energy, Inc.	5		
<p><b>Response:</b> Thank you for your comments.                      Criterion 1.15 - From the posted Guidance document: "A control center or generation control center that provides critical operating functions and tasks as identified in CIP-002 must be protected per the requirements of the Cyber Security Standard. The monitoring and operating control function includes controls performed automatically, remotely, manually, or by voice instruction." If the control center meets the specifications of criterion 1.15, it is a Critical Asset.</p>				
Scott Peterson	San Diego Gas & Electric	3	Negative	<p>SDG&amp;E is concerned that the "bright line" needs additional improvement to make sure it is clear to all entities.                      Comment on 1.8, 1.9, 1.10:                      There should be some obligation that the parties that identify the Transmission Facility (e.g. RC, PA, TP, GO) as critical also notify the Transmission Owner and Operator of that identification so the TOP and TO are aware and can protect.                       Comment on 1.8, 1.9: What does the statement "critical to the derivation of Interconnection Reliability Operating Limits (IROLs) and their associated contingencies" mean? This isn't clear.</p>
<p><b>Response:</b> Thank you for your comments.                      Criterion 1.8 and 1.9 - FAC-014-2 R5 contains all of the information concerning communication of Facilities that are critical to the derivation of Interconnection Reliability Operating Limits (IROLs) and their associated contingencies.                      Criterion 1.10 – It is agreed that communication between Generator Operators and Transmission Owners and Transmission Operators will be required to ensure that all critical Assets are identified.                      The wording for 1.8 and 1.9 came from FAC-014-2 Requirement R5.</p>				
James R. Keller	Wisconsin Electric Power Marketing	3	Affirmative	<p>We appreciate the diligence of the Standard Drafting Team in reviewing and responding to the comments and feedback provided during the previous ballot, and the changes made to the bright line criteria in Attachment 1 in response to comments and feedback.</p>
Linda Horn	Wisconsin Electric Power Co.	5		<p>We strongly support the change to a single implementation timeline of 24 months which will simplify both implementation and audit requirements, and would like to point out the fact that there is a discrepancy in timelines specified in the draft standard and the timelines specified in the draft implementation plan. This discrepancy must be corrected in the final implementation.</p>

Balloter	Company	Segment	Vote	Comment
Anthony Jankowski	Wisconsin Energy Corp.	4		<p>Also, the timeline proposed for CIP-005-4 should coincide with the timeline for the other CIP version 4 standards to further streamline compliance and audit processes.</p> <p>We would also like to express concern that, in so much as Criterion 1.1 could result in the identification of generation plant locations with no Critical Cyber Assets, the resulting requirements in Criterion 1.10 could result in expending efforts protecting transmission assets that might not otherwise need to be protected, diverting resources that might be more effectively expended elsewhere.</p> <p>Finally, we would like to express concern that the failure to specify a criticality criteria for Blackstart Resources in Criterion 1.4 will result in current blackstart-capable units not being identified as Blackstart Resources.</p> <p>Thank you for your consideration of these comments.</p>
<p><b>Response:</b> Thank you for your comments.                      The flowchart in the implementation plan has been removed.                      Your comments on CIP-005-4 will be forwarded to that team.                      Criterion 1.10 - The intent is to ensure the availability of Facilities necessary to support those generation Critical Assets. Any Transmission Facility that the loss of which would result in the loss of a Critical Asset identified in criterion 1.1 or 1.3 would need to be classified as a Critical Asset.                      Criterion 1.4 - The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p>				
Kenneth Goldsmith	Alliant Energy Corp. Services, Inc.	4	Negative	<p>Alliant Energy agrees with most of the revisions, except criterion 1.4 concerning Blackstart units. We are very concerned that with the wording as in the standard, many Registered Entities will not make their emergency generation available as blackstart resources, and the end result will be a reduction in the reliability of the BES. A possible solution is to consider a Blackstart Tier Methodology, where "Primary" Blackstart units would be subject to the full CIP criteria, and then "secondary" Blackstart units that would not be required to meet the full requirements due to their size and negligible impact on the BES.</p>
<p><b>Response:</b> Thank you for your comments.                      A tiered approach to Blackstart Resources is a good idea, and the drafting team suggests that a SAR be submitted by the entity outlining this approach to EOP-005-2. It is beyond the scope of this SDT.</p>				

Balloter	Company	Segment	Vote	Comment
Timothy Beyrle	City of New Smyrna Beach Utilities Commission	4	Affirmative	Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, not matter the importance to the region. This is not reasonable and only a few for the region ought to be identified (e.g., as identified in the regional plan). Unfortunately, not all regions have restoration plans, which is really the issue (which seems a violation to EOP-006-1 R3 to me).
<p><b>Response:</b> Thank you for your comments. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p>				
Thomas W. Richards	Fort Pierce Utilities Authority	4	Affirmative	<p>Although we are voting affirmative, FPUA strongly agrees with APPA's comments, which state:</p> <p>In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following rewording:</p> <p>1.4. Each Blackstart Resource identified in the restoration plan for a Transmission Operator serving load or generation equal to or greater than an aggregate of 1500 MW in a single Interconnection.</p> <p>1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan.</p>
<p><b>Response:</b> Thank you for your comment. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's</p>				

Balloter	Company	Segment	Vote	Comment
<p>restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Jack Alvey	Indiana Municipal Power Agency	4	Affirmative	<p>IMPA is voting affirmative on the ballot, however, there is an issue that needs to be addressed and corrected.</p> <p>In Attachment 1, criteria 1.4 (Blackstart Resources), it is including all Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. Basically, criteria 1.4 eliminates all exceptions under criteria 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. To address this issue, IMPA proposes to make the following edits to 1.4 and 1.5:</p> <p style="padding-left: 40px;">1.4 Each Blackstart Resource identified in the restoration plan for a Transmission Operator serving load or generation equal to or greater than aggregate of 1500MW in a single interconnection.</p> <p style="padding-left: 40px;">1.5 The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4 to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan.</p> <p>This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical." The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation - and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized.</p> <p>IMPA also recommends using different wording than just annual. We would prefer to see wording</p>

Balloter	Company	Segment	Vote	Comment
				<p>that might say "each calendar year but no longer than 16 months" to avoid the ambiguity of the term "annual."</p>
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." These comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p> <p>The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</p>				

Balloter	Company	Segment	Vote	Comment
Christopher Plante	Integrus Energy Group, Inc.	4	Affirmative	<p>Wisconsin Public Service Corporation and Upper Peninsula Power Company support the MRO’s NSRS comments. However, we are concerned with Attachment 1, Criterion 1.13. As currently worded, this criterion could unintentionally designate multiple smaller, disparate systems with like settings as a “system” that performs automatic load shedding of 300 MW or more, assuming the total combined load shedding capability of the disparate systems exceeds 300 MW. To prevent this, we would propose rewording the criterion as follows to more closely match the old version:</p> <p style="padding-left: 40px;">Each COMMON system or Facility that performs automatic load shedding, without human operator initiation, of 300 MW or more implementing Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program.</p>
<p><b>Response:</b> Thank you for your comments.                      A discrete component that sheds more than 300MW of load due to the implementation of Under Voltage Load Shedding (UVLS) or Under Frequency Load Shedding (UFLS) as required by the regional load shedding program is a Critical Asset. In the drafting of this criterion, the drafting team sought to include only those systems that did not require human operator initiation, and targeted in particular those Under Frequency Load Shedding (UFLS) facilities and systems and Under Voltage Load Shedding (UVLS) facilities and systems that would be implemented as part of a regional load shedding requirement to prevent Adverse Reliability Impact. It is unclear how adding the term “common” adds any additional clarity over the existing wording.</p>				
Jeff Mead	City of Grand Island	5	Negative	Comments put in official form.
<p><b>Response:</b> Thank you for your comments.</p>				
Amir Y Hammad	Constellation Power Source Generation, Inc.	5	Affirmative	<p>Constellation appreciates the hard work and dedication of the CSO 706 Standard Drafting Team.</p> <p>Constellation Power Generation believes that the Standard Drafting Team needs to further explain the technical justification for the 1500 MW bright-line threshold in Attachment 1 – 1.1 as well as the 300 MW bright-line threshold in Attachment 1 – 1.13. The technical justifications should be included in the guidance documentation.</p> <p>Constellation Energy Nuclear Group appreciates the inclusion of the language in 4.2.3: “Cyber Assets associated with Cyber Security Plans submitted to and verified by the U. S. Nuclear Regulatory Commission pursuant to 10 C.F.R. Section 73.54.” This exemption language should</p>

Balloter	Company	Segment	Vote	Comment
				also be added to CIP-003 thru -009.
<p><b>Response:</b> Thank you for your comments.                      The SDT believes that the justification for each threshold is presented in the guidance document. The posted Guidance document has been modified to add reasoning for the 300MW threshold level.                      The exemption language referenced is in the posted versions of CIP-003-4 to CIP-009-4.</p>				
Kenneth Dresner	FirstEnergy Solutions	5	Affirmative	No Comments
<p><b>Response:</b></p>				
Brent Hebert	Horizon Wind Energy	5	Negative	<p>The way 1.15 is written, it would include control centers that control 1500 MW of total generation in an Interconnection comprised of small generators dispersed throughout multiple Balancing Authorities and Reserve Sharing Groups within that Interconnection. We believe this criteria is too broad, does not meet the intent of enhancing reliability, and places a significant burden on small entities that control dispersed generation. We believe using a criteria based on the amount of generation controlled within a single BA or RSG would better enhance reliability, while not unduly burdening entities that cannot appreciably contribute to resolving BES emergencies.</p> <p>We recommend changing the criteria from “Each control center or backup control center used to control generation equal to or exceeding 1500 MWs in a single Interconnection.” to “Each control center or backup control center used to control total generation in a single BA or RSG equal to or exceeding the lesser of:</p> <ul style="list-style-type: none"> <li>•1500 MWs, or</li> <li>•The Most Severe Single Contingency for that BA RSG.</li> </ul>
<p><b>Response:</b> Thank you for your comment.                      The SDT appreciates the suggestion, but believes the posted wording is adequate.</p>				

Balloter	Company	Segment	Vote	Comment
Mike Laney	Luminant Generation Company LLC	5	Affirmative	<p>Luminant thanks the STD for their work on the standard and for the opportunity to provide comments for consideration by the SDT. Luminant believes the changes to CIP-002-4 are responsive to the concerns expressed by the industry and provide acceptable bright-line criteria for the determination of Critical Assets.</p> <p>Luminant does request the SDT to consider a wording change in the “Draft Guidance Document”. On page 10 of the Clean version of the document, in reference to Special Protection Schemes, the following is listed: “Part 1.12 designates Special Protection Systems and Remedial Action Schemes as Critical Assets. Special Protection Systems and Remedial Action Schemes may be implemented to prevent disturbances that would result in exceeding IROLs if they do not provide the function required at the time they are required or if they operate outside of the parameters they were designed for. Generation Owners and Operators which have implemented such systems and schemes must designate them as Critical Assets.” (emphasis added)</p> <p>The term “implemented” is not consistent with other NERC standards and can lead to disagreements on who is responsible for the Critical Asset CIP requirements. Luminant asks the SDT to change the language to:</p> <p style="padding-left: 40px;">“Generator Owners and Operators that own such systems and schemes....”</p> <p>The term “own” is consistent with other NERC standards that are applicable to Special Protection Systems and Remedial Action Schemes, and very clearly identifies the responsible entity. Thank you for your consideration of our comments.</p>
Brad Jones	Luminant Energy	6		
<p><b>Response:</b> Thank you for your comments. Your suggested change to the Guidance document has been made.</p>				
Don Schmit	Nebraska Public Power District	5	Affirmative	<p>Suggest changing Attachment 1, sub-paragraphs 1.4 and 1.5 to read as follows:</p> <p>1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION.</p> <p>1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path</p>

Balloter	Company	Segment	Vote	Comment
				options exist, as identified in the Transmission Operator's restoration plan.
<p><b>Response:</b> Thank you for your comments.</p> <p>Criterion 1.4 – The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets. The SDT appreciates the suggested wording, but believes the posted wording is adequate.</p>				
Michelle DAntuono	Occidental Chemical	5	Affirmative	Request clarification where Attachment 1, 1.3 allows PCs or TPs to designate units that are necessary to avoid "BES Adverse Reliability Impacts". Is this meant to be RMR units?
<p><b>Response:</b> Thank you for your comments. The units are not necessarily designated as reliability must run. If the PC or TP has identified Adverse Reliability Impacts (the impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection), then any units identified that avoid this scenario must be classified as a Critical Asset.</p>				
Joanna Luong-Tran	TransAlta Centralia Generation, LLC	5	Abstain	<p>For the criterion 1.1, the SDT response said "the guidance document posted by the SDT provides directions on the location issue". We have reviewed the guidance document and we think the terms of "a defined physical footprint" and "commonly accepted generating facility terminology" in the SDT response are still vague. Can the SDT elaborate this by providing some examples?</p> <p>For the criteria 1.6 and 1.7, we have read the SDT response and think the Generator Interconnection Facilities as defined in the NERC project <a href="http://www.nerc.com/filez/standards/Project2010-07_GOTO_Project.html">http://www.nerc.com/filez/standards/Project2010-07_GOTO_Project.html</a>, should be excluded from the Transmission Facilities, the term used in the criteria 1.6 and 1.7. The guidance document discusses this. We think it is appropriate to clarify this in the standard, instead of addressing this in the guidance document.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>Additional clarity has been added to the Guidance document. The following sentence was added to the language explaining criterion 1.1: "Single plant location refers to a group of generating units occupying a defined physical footprint, often but not always, these units are surrounded by a common</p>				

Balloter	Company	Segment	Vote	Comment
<p>fence, have a common entry point, share common facilities such as warehouses, water plants and cooling sources, follow a similar naming convention (plant name - unit number) and fall under a common management organization.”</p> <p>The SDT believes that the Guidance document is the appropriate place for this discussion until the Generation Interconnection Facilities are incorporated into the standards.</p>				
Brenda Powell	Constellation Energy Commodities Group	6	Negative	<p>Constellation appreciates the hard work and dedication of the CSO 706 Standard Drafting Team. Constellation Energy Commodities Group continues to be concerned that Attachment 1, criteria 1.15 inappropriately covers control centers in one-size fits all approach. While there are EMS systems that can directly control generation, there are also Generation Management Systems (GMS) that function on a much lower level. For instance, many GMS systems:</p> <ul style="list-style-type: none"> <li>• Do not open and close breakers of any critical asset</li> <li>• Simply send a signal to units operating in the AGC mode and do not directly move the units output</li> <li>• Can only request MW movement between those ranges. Each generating unit controls the set points (low and high AGC limits and ramp rates).</li> <li>• May be turned off and/or switched locally to manual dispatch mode without disruption to the BES.</li> </ul> <p>If, through malicious means, attempts are made to use the GMS to adversely impact the reliable operation of a generating unit, the generating unit would be taken off of AGC. No single aspect of system operations should be viewed in a vacuum. By design, multiple points of system information are processed and reacted to in context of each other. Mechanical and human checks and balances react to data to maintain a responsive, reliable system. Should the data become compromised for some reason operators will react to the disparities by switching to manual or other operational measures.</p> <p>Requirement 2 distinguishes critical cyber assets as “shared Cyber Assets that could, within 15 minutes, adversely impact the reliable operation of any combination of units that in aggregate equal or exceed Attachment 1, criterion 1.1. The control centers covered under criterion 1.15 should also include the same distinction.</p> <p>In addition, defining the control center area would be more appropriately determined by</p>

Balloter	Company	Segment	Vote	Comment
				<p>planning studies, none of which are as broad as a single Interconnection. Since this may create complications for standard applicability, we propose that the area be set by NERC Regional area.</p> <p>1.15. Each control center or backup control center used to control generation at multiple plant locations, for any generation Facility or group of generation Facilities identified in criteria 1.1, 1.3, or 1.4. Each control center or backup control center used to control generation equal to or exceeding 1500 MW in a single Interconnection.</p> <p>For the above reasons, we propose the following revision:</p> <p>1.15 Each control center or backup control center used to control generation at multiple plant locations, for any generation Facility or group of generation Facilities identified in criteria 1.1, 1.3, or</p> <p>1.4. Each control center or backup control center used to control generation that could, within 15 minutes, adversely impact the reliable operation of any combination of units that in aggregate equal or exceed 1500 MW of generation in a single NERC Regional area.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>The SDT considered your proposed wording. In order for the plant to determine that if, "through malicious means, attempts are made to use the GMS to adversely impact the reliable operation of a generating unit, the generating unit could be taken off of AGC," it is felt that the protections provided in CIP-003 to CIP-009 are necessary. In addition, the SDT believes that the generation summary must be performed at the NERC Interconnection, because control actions are not taken at the NERC Regional level.</p>				
Larry W. Rodriguez	Entegra Power Services	6	Negative	<p>FERC &amp; NERC must attempt to provide the security needed, BUT in a way that balances adequate security with an entities ability to absorb the enormous costs! We are a small shop IPP which can not pass on these costs to ratepayers as the IOUs. The up front "Brightline" costs and ongoing costs MAY PUT US OUT OF BUSINESS and reduce jobs in a terrible economic time for the entire country. Please consider some efforts to balance adequate security needs with the size and financial capability of companies.</p>
<p><b>Response:</b> Thank you for your comments.</p>				

Balloter	Company	Segment	Vote	Comment
<p>The SDT and volunteer industry participants have developed appropriate Critical Asset Identification criteria which have been presented to industry through various iterations for review and feedback.</p> <p>In addition, the SDT has attempted to factor in this issue by limiting the scope of Critical Cyber Assets to those shared Cyber Assets that could, within 15 minutes, adversely impact the reliable operation of any combination of units that in aggregate equal or exceed Attachment 1, criterion 1.1.</p>				
Joseph O'Brien	Northern Indiana Public Service Co.	6	Affirmative	Concerns included in previous ballot have been addressed
<p><b>Response:</b> Thank you for your comments.</p>				
Jim R Stanton	SPS Consulting Group Inc.	8	Negative	While the changes in the Criteria 1.3 allow generators to be informed of whether they are designated a Critical Asset by the Planning Coordinator or Transmission Planner, that was not the point. The discretion to make such designations without proper due diligence or independent review remains. Planning studies have a wide latitude of assumptions and it would be quite easy designate one's competitor as critical and employ the assumptions in the planning models to make that happen. Lacking independence at the PC and TP level, independent review is the only way to insure competition is not blunted by this ability to designate one's competitor as critical.
<p><b>Response:</b> Thank you for your comments.</p> <p>In the Functional Model, one of the tasks of the Planning Coordinator is "Facilitates the integration of the respective plans of the Resource Planners and Transmission Planners within the Planning Coordinator area.</p> <p>a. Reviews the integrated plan with respect to established reliability needs considering the impact on and by adjoining systems.</p> <p>b. In coordination with the Resource Planners and Transmission Planners, facilitates the development of alternative solutions for plans that do not meet those reliability needs."</p> <p>One of the alternative solutions developed may require the availability of a particular generator to meet reliability needs and avoid an Adverse Reliability Impact.</p> <p>Likewise, one of the tasks of the Transmission Planning function is "Evaluate, develop, document, and report on expansion plans for the Transmission Planner area. Assess whether the integrated plan meets reliability needs, and, if not, report on potential network conditions or configurations that do not meet performance requirements." If it is determined through system studies that a unit must run in order to preserve the reliability of the BES, such as due to a category C3 contingency as defined in TPL-003 or a category D contingency as defined in TPL-004, then that unit must be classified as a Critical Asset.</p>				

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Guy V. Zito	Northeast Power Coordinating Council, Inc.	10	Affirmative	<p>Many Canadian members of NPCC are of the opinion that in Attachment 1 of the draft CIP-002-4 standard an RC led exclusion provision should be available to allow some facilities to be exempted from the CIP standards.</p> <p>Also the designation of a PC in Attachment 1 in the criteria "1.3" should be removed as there is a liability issue for the PC that fails to correctly identify a GO GOP as being impactful. The TP is the appropriate entity, and correctly identified, to do this and is more likely to have the necessary information in interconnection agreements and design specifications coordinated at the local level.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>The SDT believes that having an exception process to the criteria presents the same challenges associated with a risk-based assessment in external review and oversight.</p> <p>One of the functions identified in the Functional Model is Planning Reliability, which has an identified task of "Evaluate, develop, document, and report on resource and transmission expansion plans for the Planning Coordinator area. Integrate the respective plans, evaluate the impact of those plans on and by adjoining Planning Coordinator's integrated plans and assess whether the integrated plan meets reliability needs, and, if not, then to report on potential transmission system and resource adequacy deficiencies and suggest or facilitate the process for developing alternative plans to mitigate identified deficiencies." The Functional Entity responsible for that function is the Planning Coordinator, who is "(t)he functional entity that coordinates, facilitates, integrates and evaluates (generally one year and beyond) transmission facility and service plans, and resource plans within a Planning Coordinator area and coordinates those plans with adjoining Planning Coordinator areas." Another function in the Functional Model is Transmission Planning, which has an identified task of "Evaluate, develop, document, and report on expansion plans for the Transmission Planner area. Assess whether the integrated plan meets reliability needs, and, if not, report on potential network conditions or configurations that do not meet performance requirements and provide potential alternative solutions to meet performance requirements." The Functional Entity responsible for that function is the Transmission Planner, who is "(t)he functional entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within a Transmission Planner area." The Reliability Coordinator, on the other hand, is "The functional entity that maintains the Real-time operating reliability of the Bulk Electric System within a Reliability Coordinator Area." The focus of Criterion 1.3 is the long-term planning horizon, not real-time.</p>				
Stacy Dochoda	Southwest Power Pool Regional Entity	10	Affirmative	<p>1) Criteria 1.5 can be read to limit the cranking path to only the path between the entity's own defined blackstart resource and the generation resource to be started. This fails to consider the situation where cranking power is obtained through a tie interconnection to an adjacent utility or generation owner/operator. In this instance, the cranking path needs to be defined as starting at the interconnect point substation, in effect making the adjacent utility the blackstart</p>

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				<p>resource. If not clarified, a number of entities could identify no cranking paths to generation that must be started as part of initial system restoration simply because they have no blackstart generation resources that they, themselves, own and/or operate.</p> <p>2) It is still not clear as to how far blackstart must go before initial system restoration is complete. Black start should be defined as starting the entity’s generation resources to the point that load can be served (not to be confused with bringing on load to balance generation during the black start sequencing). This is often more than starting the first “black start” combustion turbine unit to start a thermal unit. Unless that black start unit has sufficient capacity to start individually every other generation resource in the entity’s footprint that is not self-starting, additional generation is required even if not specifically identified as a black start resource in the entity’s restoration plan.</p> <p>3) There is sufficient opportunity for confusion and interpretation of the term Control Center that if the term is not to be added to the NERC Glossary, it should be defined locally to the standard.</p> <p>4) Criteria 1.10 should be modified to refer to Critical Assets. In other words, “...would result in the loss of the Critical Assets...”</p> <p>5) Criteria 1.14, 1.15. and 1.16 should refer to control center “and” backup control center rather than “or.”</p> <p>6) Measure M1 should be modified to state “The Responsible Entity shall make available its approved list of Critical Assets as specified in Requirement R1.” (addition of the word “approved”)</p> <p>7) Measure M2 should be modified to state “The Responsible Entity shall make available its approved list of Critical Cyber Assets as specified in Requirement R2.” (addition of the word “approved”)</p>

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				<p>8) The Responsible Entity data retention requirement (Section D.1.4.1) should be modified to require records to be kept since the effective date of the standard or the most recent scheduled audit of this version of the standard, whichever is a shorter period of time, unless a shorter retention period (such as the 90-day routine log retention found in several of the CIP standards) is specified in a requirement. This is in keeping with NERC Compliance Process Bulletin #2009-005 'Current In-Force Document Data Retention Requirements for Registered Entities'. A similar modification should be made to CIP-003-4 through CIP-009-4. (Entities are already expected to retain all evidence in support of the annual, or in the case of the CIP standards to date, semi-annual self certification, so this is not an undue burden. Retention of records with the exception of specific information with a prescribed shorter retention, such as logs, will allow the CEA to verify sustained compliance with the standards over the full audit period. And, in the case of the logs, the entity will need to maintain some sort of evidence that logs were retained for at least 90 days, although retention of the actual logs is not required.)</p> <p>9) Requirement R1 should be clarified to require the first list of identified Critical Assets to be developed prior to the effective date of the Standard. A number of entities have adopted the position that an annual requirement allows the first instance of the requirement to be performed any time within the first year after the effective date.</p> <p>10) Requirement R2 should be clarified to require the first list of identified Critical Cyber Assets to be developed prior to the effective date of the Standard. A number of entities have adopted the position that an annual requirement allows the first instance of the requirement to be performed any time within the first year after the effective date.</p> <p>11) The first bulleted qualifying criterion found in Requirement R2 states “The Cyber Asset uses a routable protocol to communicate outside the Electronic Security Perimeter.” Although well intentioned, this does not adequately address risk exposure. While a given Critical Cyber Asset might not communicate itself with Cyber Assets outside of the Electronic Security Perimeter, the network it is connected to may well have connectivity to external networks. That external connectivity offers a vector for compromise through an intermediary system that both the external network and the Critical Cyber Asset are connected to. This exclusion should only apply</p>

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				<p>in the instance where the network employing a routable protocol is completely isolated from any network not enclosed within the same Electronic Security Perimeter.</p> <p>12) A number of entities are getting around the routable protocol criteria for Critical Cyber Assets in Requirement R2 by utilizing data diodes for communication. This issue desperately needs to be addressed in this revision of the requirement.</p> <p>13) Requirement R3 should be modified to require any update of the Critical Asset or Critical Cyber Asset list to be approved. This activity should be separated from the required annual review and approval, where the approval is required even if no changes were identified.</p> <p>14) The proposed effective date of eight calendar quarters after regulatory approval (or the first day of the ninth calendar quarter after NERC BoT approval where regulatory approval is not required) is excessive and should be reverted back to the original two calendar quarter specification. The expectation is that the first Critical Asset and Critical Cyber Asset list must be developed by the effective date and allowing two years given straightforward bright-line criteria is not reasonable. While the concern may be that the entities would be expected to be fully compliant with all requirements of all eight standards by the effective date, such is not the case. Entities are expected to maintain compliance for any currently identified Critical Cyber Assets that appear on the Critical Cyber Asset list under the bright-line criteria. The entity then has up to two years to bring into compliance any newly identified Critical Cyber Assets stemming from the Version 4-compliant Critical Cyber Asset list. With an eight-calendar quarter effective date, entities can logically assume that they would have up to four years to come into compliance.</p> <p>15) Figure 1: Sample Implementation Plan Timeline (General Case) in the accompanying guidance document should be restored to clarify the compliance timeline issue discussed in the previous comment.</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>1. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." Additionally, it should be noted that</p>				

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				<p>EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System."</p> <ol style="list-style-type: none"> <li>2. Again, A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage."</li> <li>3. Since the term "control center" is used in other NERC standards without confusion, it can be reasonably expected that a commonly accepted industry definition exists. The SDT believes that defining this term under this proposed version of the Standard would have far-reaching impacts beyond the scope of CIP-002-4 to CIP-009-4.</li> <li>4. The SDT has considered your proposal and believes the posted wording is adequate.</li> <li>5. The SDT has considered your proposal and believes the posted wording is adequate.</li> <li>6. Since the list may be updated between annual approvals, the most updated list should be provided for Measure M1.</li> <li>7. Since the list may be updated between annual approvals, the most updated list should be provided for Measure M2.</li> <li>8. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. The team deliberately limited the scope of changes in this interim standard to minimize the impact on the industry while addressing the identified consistency issues. The suggested changes to the data retention requirement will be considered in a subsequent version of the CIP standards.</li> <li>9. In order to be compliant with CIP-002-4 on the effective date of the standard, the list must be developed by the effective date. This is clarified in the implementation plan.</li> <li>10. In order to be compliant with CIP-002-4 on the effective date of the standard, the list must be developed by the effective date. This is clarified in the implementation plan.</li> <li>11. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. The team deliberately limited the scope of changes in this interim standard to minimize the impact on the industry while addressing the identified consistency issues. This issue will be considered in a subsequent version of the CIP standards.</li> <li>12. The scope of CIP-002-4 was to address the consistency issues with the Critical Asset identification method. The team deliberately limited the scope of changes in this interim standard to minimize the impact on the industry while addressing the identified consistency issues. This issue will be considered in a subsequent version of the CIP standards.</li> <li>13. The SDT debated this issue and determined that an annual approval of each list was sufficient.</li> <li>14. Currently identified CCAs which would remain on the list after applying "bright-line" criteria should comply with Version 3 of the CIP Cyber Security Standards until the Effective Date of Version 4. CCAs identified through the first application of Attachment 1 of CIP-002-4 shall comply with Version 4 of the CIP Cyber Security Standards on the Effective Date as well. In essence, an entity should have their list of CCAs fully compliant with Version 4 of the CIP Cyber Security Standards on the Effective Date, which occurs approximately 2 years after FERC approval in the US.</li> <li>15. Currently identified CCAs which would remain on the list after applying "bright-line" criteria should comply with Version 3 of the CIP Cyber Security Standards until the Effective Date of Version 4. CCAs identified through the first application of Attachment 1 of CIP-002-4 shall comply with Version 4 of the CIP Cyber Security Standards on the Effective Date as well. In essence, an entity should have their list of CCAs fully compliant with Version 4 of the CIP Cyber Security Standards on the Effective Date, which occurs approximately 2 years after FERC approval in the US.</li> </ol>

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Larry D. Grimm	Texas Reliability Entity	10	Affirmative	In Part D, Compliance, Section 1.2, the acronyms RE and CEA should be spelled out (Regional Entity and Compliance Enforcement Authority).
<p><b>Response:</b> Thank you for your comment. Your suggested changes have been made.</p>				
Louise McCarren	Western Electricity Coordinating Council	10	Affirmative	<p>We recognize that the drafting team was charged with developing a bright line methodology for determining Critical Assets to address the need for consistency and that the bright line methodology accomplishes that.</p> <p>We continue to have concerns that for some entities in the West, the bright line methodology may result in fewer facilities being identified as Critical Assets than under the entities individual methodologies required by the current version of CIP-002.</p> <p>We also continue to have concerns that the proposed standard is not as clear as it could be regarding the identification of Critical CYBER Assets and urge NERC to consider a bright line methodology for Critical CYBER Assets in future revisions of the standard.</p>
<p><b>Response:</b> Thank you for your comments. While some entities may have a few assets fall off of its Critical Asset list, it is expected that overall more BES assets in North America will be classified as Critical Assets. This issue will be considered in a subsequent version of the CIP standards.</p>				
Frank Gaffney	Florida Municipal Power Agency	4	Affirmative	<p>FMPA appreciates the hard work of the SDT. We have five issues that were not a big enough reasons to vote Negative, but, we would like to see addressed:</p> <p>1. On Attachment 1, bullet 1.12, the phrase "for failure to operate as designed" was added since the last posting. We believe that this is inappropriate. Most SPS's are installed for automatic response to multi-contingency events. For an IROL to be exceeded, the multi-contingency event would need to occur at system conditions that would cause an IROL to be exceeded at the same time that the SPS failed to operate. The probability of the multi-contingency event occurring at such system conditions is very small (e.g., 1 in 50 year order of magnitude frequency), and the SPS would need to fail at that same time. We believe that the appropriate risk to protect against is manipulation of SPS at conditions experienced more frequently and we believe the original wording is correct..</p> <p>2. Attachment 1, bullets 1.4 and 1.5. Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the region's black-start unit and cranking paths ought to be</p>
David Schumann	Florida Municipal Power Agency	5		
Richard L. Montgomery	Florida Municipal Power Agency	6		

Balloter	Company	Segment	Vote	Comment
				<p>identified as critical (e.g., as identified in the regional plan). FMPA suggests something like: "Blackstart units and cranking paths determined as critical by the Reliability Coordinator", which is similar in concept to Attachment 1, bullet 1.3.</p> <p>3. Use of the word "annual". We would probably be better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy of the ambiguity of the term "annual".</p> <p>4. 1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the combined Contingency Reserves of entities within the Reliability Coordinator or something like that</p> <p>5. Attachment 1, bullet 1.13 Automatic load shedding of 300 MW. The 300 MW is rather arbitrary and it ought to be any cyber-system controlled ability to shed load, not just automatic, of the same target of 1.1 (currently 1500 MW). Loss of 300 MW of load has less impact to BES reliability than loss of 300 MW of generation, so, there is inconsistency between the 1500 MW target for generation of bullet 1.1 and the 300 MW loss of load target of 1.13.</p>
<p><b>Response:</b> Thank you for your comments.</p> <ol style="list-style-type: none"> <li>1. "Failure to operate as designed" was added to this criterion to account for human error, misconfigurations, improper change management (whether unintentional or malicious).</li> <li>2. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</li> <li>3. The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</li> <li>4. The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities.</li> <li>5. The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities. The posted Guidance document has been modified to add reasoning for the 300 MW threshold level.</li> </ol>				
Larry E Watt	Lakeland Electric	1	Negative	<p>We appreciate the hard work of the SDT. We have four issues that we would like to see addressed:</p> <ol style="list-style-type: none"> <li>1. Use of the word "annual". We would probably better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy of the ambiguity of the term.</li> </ol>

Balloter	Company	Segment	Vote	Comment
				<p>2. 1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the combined Contingency Reserves of entities within the Reliability Coordinator or something like that</p> <p>3. Automatic load shedding of 300 MW. The 300 MW is arbitrary and it ought to be any cyber-system controlled load shedding, not just automatic, of the same target of 1.1 (currently 1500 MW)</p> <p>4. Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the regions black-start unit and cranking paths ought to be identified as critical (e.g., as identified in the regional plan). FMPA suggests something like: "Blackstart units and cranking paths determined as critical by the Reliability Coordinator", which is similar in concept to Attachment 1, bullet 1.3.</p>
<p><b>Response:</b> Thank you for your comments.</p> <ol style="list-style-type: none"> <li>1. The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</li> <li>2. The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities.</li> <li>3. The posted Guidance document has been modified to add reasoning for the threshold level.</li> <li>4. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</li> </ol>				
Gregg R Griffin	City of Green Cove Springs	3	Affirmative	<p>Use of the word "annual", probably better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy</p> <p>1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the contingency reserves of the Reliability Coordinator or something like that Automatic load shedding of 300 MW. The 300 MW is arbitrary and it ought to be any load shedding of the same target of 1.1 (currently 1500 MW)</p> <p>Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, not matter the importance to the region. This is not reasonable and only a few for the region ought to be identified (e.g., as identified in the regional plan). Unfortunately, not all regions have</p>

Balloter	Company	Segment	Vote	Comment
				restoration plans, which is really the issue (which seems a violation to EOP-006-1 R3 to me).
<p><b>Response:</b> Thank you for your comments.                      The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.                      The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities. The posted Guidance document has been modified to add reasoning for the threshold level.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p>				
Paul Shipps	Lakeland Electric	6	Negative	Avoid using "annual" - better to use "each calendar year"  Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the regions black-start unit and cranking paths ought to be identified as critical (e.g., as identified in the regional plan). Better to say "Blackstart units and cranking paths determined as critical by the Reliability Coordinator"
<p><b>Response:</b> Thank you for your comments.                      The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p>				

Balloter	Company	Segment	Vote	Comment
Randall McCamish	City of Vero Beach	1	Affirmative	<p>The City of Vero Beach appreciates the hard work of the SDT. We have four issues that were not a big enough reason to vote Negative, but, we would like to see addressed:</p> <ol style="list-style-type: none"> <li>1. Use of the word "annual". We would probably better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy of the ambiguity of the term.</li> <li>2. 1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the combined Contingency Reserves of entities within the Reliability Coordinator or something like that.</li> <li>3. Automatic load shedding of 300 MW. The 300 MW is arbitrary and it ought to be any cyber-system controlled load shedding, not just automatic, of the same target of 1.1 (currently 1500 MW)</li> <li>4. Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the regions black-start unit and cranking paths ought to be identified as critical (e.g., as identified in the regional plan). The City of Vero Beach suggests something like: "Blackstart units and cranking paths determined as critical by the Reliability Coordinator", which is similar in concept to Attachment 1, bullet 1.3.</li> </ol>
<p><b>Response:</b> Thank you for your comments.</p> <ol style="list-style-type: none"> <li>1. The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</li> <li>2. The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities.</li> <li>3. The posted Guidance document has been modified to add reasoning for the threshold level.</li> <li>4. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</li> </ol>				

Balloter	Company	Segment	Vote	Comment
Ralph Frederick Meyer	Empire District Electric Co.	1	Negative	<p>EDE appreciates the work that the drafting team has performed to get this standard to this point in the balloting process; however EDE casts a negative vote for the following reasons:</p> <p>1) The term “annual” is used in R1 twice and R3 twice. While NERC has not defined the term annual I would suggest the drafting team take the approach to change the wording from “annual” to either “Twelve Full Calendar Months” or “Once per Calendar year”. This would clarify two of these requirements in the proposed standard. By providing clarity here avoids future conflicts between auditor’s interpretations of this standard and the companies wishing to comply.</p> <p>2) In attachment A, 1.4. EDE would suggest that the Drafting team change 1.4 to read: “Each Blackstart Unit identified in the Transmission Operator’s Restoration Plan restoring the initial load to a group of generator units at a single plant location with an aggregate highest rated net Real Power capability of the preceding 12 months equal to or exceeding 1500MW.”</p> <p>3) And EDE would suggest the change to 1.5 to read: “The facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Unit identified in 1.4 to the first interconnection point of the generation unit(s) to be started, up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator’s restoration plan.” These three changes would further signify the importance of the bright line on Highly Impact facilities to the Bulk Electric System that the drafting team is seeking to accomplish. We understand the effort the drafting team has put forth to this point and feel that they are close to a standard that the industry can comply with if some minor considerations were taken.</p>
<p><b>Response:</b> Thank you for your comments.</p> <ol style="list-style-type: none"> <li>The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</li> <li>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area “to a state whereby the choice of Load to be restored is not driven by the need to</li> </ol>				

Balloter	Company	Segment	Vote	Comment
<p>control frequency or voltage." Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system.</p> <p>3. Please refer to response to comment 2.</p>				
Kenneth Simmons	Gainesville Regional Utilities	3	Affirmative	<p>GRG has two comments we would like to see addressed:</p> <p>1- Attachment 1, bullets 1.4 and 1.5. Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the region's black-start unit and cranking paths ought to be identified as critical (e.g., as identified in the regional plan). GRU suggests something like: "Blackstart units and cranking paths determined as critical by the Reliability Coordinator", which is similar in concept to Attachment 1, bullet 1.3.</p> <p>2- 2- Use of the word "annual". We would be better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy of the ambiguity of the term "annual"</p>
<p><b>Response:</b> Thank you for your comments.</p> <p>1. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system.</p> <p>2. The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</p>				
Matt Culverhouse	City of Bartow, Florida	3	Affirmative	<p>FMPA appreciates the hard work of the SDT. We have four issues that were not a big enough reason to vote Negative, but, we would like to see addressed:</p> <p>1. Use of the word "annual". We would probably better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy of the ambiguity of the term.</p>

Balloter	Company	Segment	Vote	Comment
				<p>2. 1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the combined Contingency Reserves of entities within the Reliability Coordinator or something like that</p> <p>3. Automatic load shedding of 300 MW. The 300 MW is arbitrary and it ought to be any cyber-system controlled load shedding, not just automatic, of the same target of 1.1 (currently 1500 MW)</p> <p>4. Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the regions black-start unit and cranking paths ought to be identified as critical (e.g., as identified in the regional plan). FMPA suggests something like: "Blackstart units and cranking paths determined as critical by the Reliability Coordinator", which is similar in concept to Attachment 1, bullet 1.3.</p>
<p><b>Response:</b> Thank you for your comments.</p> <ol style="list-style-type: none"> <li>1. The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</li> <li>2. The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities.</li> <li>3. The posted Guidance document has been modified to add reasoning for the threshold level.</li> <li>4. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage."</li> </ol>				
Stan T. Rzad	Keys Energy Services	1	Affirmative	<p>Use of the word "annual", probably better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy 1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the contingency reserves of the Reliability Coordinator or something like that Automatic load shedding of 300 MW. The 300 MW is arbitrary and it ought to be any load shedding of the same target of 1.1 (currently 1500 MW) Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, not matter the importance to the region. This is not reasonable and only a few for the region ought to be identified (e.g., as identified in the regional plan). Unfortunately, not all regions have restoration plans, which is</p>

Balloter	Company	Segment	Vote	Comment
				<p>really the issue (which seems a violation to EOP-006-1 R3 to me). FMPA appreciates the hard work of the SDT.</p> <p>We have five issues that were not a big enough reasons to vote Negative, but, we would like to see addressed:</p> <p>On Attachment 1, bullet 1.12, the phrase "for failure to operate as designed" was added since the last posting. We believe that this is inappropriate. Most SPS's are installed for automatic response to multi-contingency events. For an IROL to be exceeded, the multi-contingency event would need to occur at system conditions that would cause an IROL to be exceeded at the same time that the SPS failed to operate. The probability of the multi-contingency event occurring at such system conditions is very small (e.g., 1 in 50 year order of magnitude frequency), and the SPS would need to fail at that same time. We believe that the appropriate risk to protect against is manipulation of SPS at conditions experienced more frequently and we believe the original wording is correct..</p> <p>Attachment 1, bullets 1.4 and 1.5. Any and all blackstart and cranking paths that are part of a TOP's restoration plan are included, no matter the importance to the region. This is not reasonable and only a few of the region's black-start unit and cranking paths ought to be identified as critical (e.g., as identified in the regional plan). FMPA suggests something like: "Blackstart units and cranking paths determined as critical by the Reliability Coordinator", which is similar in concept to Attachment 1, bullet 1.3.</p> <p>Use of the word "annual". We would probably be better off avoiding the word and saying something like "each calendar year but no longer than 16 months" to avoid controversy of the ambiguity of the term "annual".</p> <p>1500 MW used in Attachment 1, item 1.1, and the 1000 MVAR used in 1.2, are rather arbitrary and ought to vary by region. 1.1 could use the combined Contingency Reserves of entities within the Reliability Coordinator or something like that Attachment 1, bullet 1.13 Automatic load shedding of 300 MW. The 300 MW is rather arbitrary and it ought to be any cyber-system controlled ability to shed load, not just automatic, of the same target of 1.1 (currently 1500 MW). Loss of 300 MW of load has less impact to BES reliability than loss of 300 MW of generation, so, there is inconsistency between the 1500 MW target for generation of bullet 1.1</p>

Balloter	Company	Segment	Vote	Comment
				and the 300 MW loss of load target of 1.13.
<p><b>Response:</b> Thank you for your comments.</p> <p>“Failure to operate as designed” was added to this criterion to account for human error, misconfigurations, improper change management (whether unintentional or malicious)</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions, regardless of MW capability. As such, these assets deserve protection as Critical Assets.</p> <p>The phraseology you are concerned about (annual) exists in the current CIP-002-3 standard. The SDT expects this phraseology to be resolved in the next version.</p> <p>The issue with using different MW values in each region is that it does not meet the objective of uniform application of Critical Asset identification across all entities. The posted Guidance document has been modified to add reasoning for the 300 MW threshold level.</p>				
Allen Mosher	American Public Power Association	4	Abstain	The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1’s Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA’s reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control

Balloter	Company	Segment	Vote	Comment
				<p>center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW).</p> <p>In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5 shown in redline CAPS/strikeout: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator[delete: 's restoration plan] SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical." The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or</p>

Balloter	Company	Segment	Vote	Comment
				low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)

**Response:** Thank you for your comment.

The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.

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Nathan Mitchell	American Public Power Association	3	Abstain	<p>The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1’s Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA’s reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5 shown in redline CAPS/strikeout: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator’s restoration plan SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for</p>

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				<p>full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.) If the SDT addresses this issue, APPA could recommend that the standard be approved.</p>
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the “catch-22” concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area “to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage.” The APPA comments indicate that the assets of concern to them are being utilized “once voltage and frequency are stabilized.” As such, these assets are not required to be included in the TOP’s restoration plan. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those “located within the Transmission Operator’s System.” As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				

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Tony Eddleman	Nebraska Public Power District	3	Affirmative	<p>The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1’s Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA’s reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following to 1.4 and 1.5: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP</p>

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				<p>systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				

Balloter	Company	Segment	Vote	Comment
John S Bos	Muscatine Power & Water	3	Negative	<p>MP&amp;W agrees with all APPA comments. APPA points out, there is an obvious consequence from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This noticeable interaction will cause many if not all registered TOP's, BA's, and GO's that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of the size of the entity. As the APPA points out, EOP-005 requires all TOPs to have a restoration plan. EOP-005 specifies that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a Critical Asset. Criterion 1.5 requires the identification of the Cranking Paths as Critical Assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a Critical Asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a Critical Asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, MP&amp;W agrees with the APPA position in the following edits: Criterion 1.4. Each Blackstart Resource identified in the Restoration Plan for a Transmission Operator serving load or generation equal to or greater than an aggregate of 1500 MW in a single Interconnection. Criterion 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. MP&amp;W agrees with surgical approach proposed by APPA, that ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full</p>

Balloter	Company	Segment	Vote	Comment
				<p>CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” MP&amp;W concurs with the APPA assessment that the experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES. Rather, their importance is to start generation to serve their small, local loads after a system separation. At this point, these smaller systems are to wait for direction from the Reliability Coordinator on resynchronization with the rest of the BES, once voltage and frequency are stabilized. MP&amp;W again consents with the APPA comments. We recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Therefore, the revised criteria would support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				

Balloter	Company	Segment	Vote	Comment
John D. Martinsen	Public Utility District No. 1 of Snohomish County	4	Affirmative	<p>The District believes to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1’s Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. The District’s reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5 shown in redline CAPS/strikeout: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator’s restoration plan SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009</p>

Balloter	Company	Segment	Vote	Comment
				<p>compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comment. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
William G. Hutchison	Southern Illinois Power Coop.	1	Negative	SIPC believes there is an unintended consequence from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. EOP-005 requires all TOPs to

Balloter	Company	Segment	Vote	Comment
				<p>have a restoration plan. SIPC believes that EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, the following edits to 1.4 and 1.5 are suggested. 1.4. Each Blackstart Resource identified in the restoration plan for a Transmission Operator serving load or generation equal to or greater than an aggregate of 1500 MW in a single Interconnection. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical." The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While it is recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>

Balloter	Company	Segment	Vote	Comment
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Bob Essex	Cowlitz County PUD	5	Negative	<p>The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA's reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4</p>

Balloter	Company	Segment	Vote	Comment
				<p>swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5: 1.4 Each Blackstart Resource identified in the restoration plan for a Transmission Operator serving load or generation equal to or greater than an aggregate of 1500 MW in a single interconnection. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4 to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical." The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comment. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their</p>				

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<p>availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Russell A Noble	Cowlitz County PUD	3	Negative	Please see comments submitted by Rick Syring of Cowlitz PUD. Cowlitz PUD commends the hard work of the SDT and hopes to change from a negative to an affirmative vote once the "catch 22" problem is fixed.
<p><b>Response:</b> Thank you for your comment.</p>				
Bob C. Thomas	Illinois Municipal Electric Agency	4	Affirmative	IMEA appreciates the SDT's hard work to simplify and prioritize the CIP Reliability Standards by establishing reasonable brightline criteria. In addition to our Affirmative vote, IMEA supports the comments and concerns submitted by the American Public Power Association and the Florida Municipal Power Agency. We would support the proposed revisions as an improvement in clarity that will focus cyber security controls on assets that are truly critical to BES real-time operations.
<p><b>Response:</b> Thank you for your comments. Please refer to the responses provided to APPA and the Florida Municipal Power Agency.</p>				
Tim Kelley	Sacramento Municipal Utility District	1	Affirmative	SMUD supports the APPA comment noting that an approach that ensures generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical."
Mike Ramirez	Sacramento Municipal Utility District	4		
James Leigh-Kendall	Sacramento Municipal Utility	3		

Balloter	Company	Segment	Vote	Comment
	District			
Bethany Hunter	Sacramento Municipal Utility District	5		
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Richard L. Koch	Nebraska Public Power District	1	Affirmative	The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA's reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control

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				<p>center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical." The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line</p>

Balloter	Company	Segment	Vote	Comment
				criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
James W. Beck	Transmission Agency of Northern California	1	Affirmative	"TANC supports the comments made by other APPA members regarding the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17."
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT</p>				

Balloter	Company	Segment	Vote	Comment
<p>does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Danny Dees	MEAG Power	1	Affirmative	MEAG is sympathetic towards the position of the smaller APPA members (that are registered as a TOP) with regards to CIP 002-4 bringing into scope (as critical assets) smaller Blackstart Resources that may not necessarily be essential or critical to the operation of the BES.
Steven M. Jackson	Municipal Electric Authority of Georgia	3		
Steven Grego	MEAG Power	5		
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Linda R. Jacobson	City of Farmington	3	Affirmative	FEUS shares the concerns expressed by APPA with the draft standard regarding a 'catch 22' without a threshold designated for Blackstart Resources and cranking paths set forth in Criteria 1.4 and 1.5. However, FEUS believes the bright line criteria represented in CIP-002-4 is an improvement of the current CIP-002-3. FEUS also recognizes the importance of getting the bright line criteria approved; therefore, FEUS voted affirmative with an expectation the concern will be addressed in a future revision.
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their</p>				

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<p>availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Ernest Hahn	Metropolitan Water District of Southern California	1	Affirmative	<p>Although MWD is voting yes, it supports the concern raised by the APPA CIP Task Force. The APPA Task Force has identified what may be an unintended consequence from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size.</p>
<p><b>Response:</b> Thank you for your comment. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Jeff Knottek	City Utilities of	1	Negative	We support the comments submitted by the APPA task force.

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	Springfield, Missouri			
<p><b>Response:</b> Thank you for your comment.</p> <p>The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Paul Morland	Colorado Springs Utilities	1	Affirmative	<p>CSU shares the concerns expressed by many other APPA members with the draft standard and CSU would support the following proposed revision developed by the APPA CIP Task Force as an improvement in clarity that will focus cyber-security controls on assets that are truly Critical to BES real-time operations: The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA's reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires</p>

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				<p>each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5 shown in redline CAPS/strikeout: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator’s restoration plan serving load or generation equal to or greater than an aggregate of 1500 MW in a single Interconnection. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator’s restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through</p>

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				development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
David Gordon	Massachusetts Municipal Wholesale Electric Company	5	Abstain	MMWEC shares APPA's concerns expressed with the draft standard. MMWEC would support APPA's proposed revision as an improvement in clarity that will focus cyber-security controls on assets that are truly Critical to BES real-time operations.
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these</p>				

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<p>resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Steve Alexanderson	Central Lincoln PUD	3	Abstain	<p>Central Lincoln supports the following APPA CIP Task Force comments. If this issue is addressed as suggested, we will vote affirmative on the next ballot. The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA's reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through</p>

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				<p>1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5 shown in CAPS: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator SERVING LOAD OR GENERATION EQUAL TO OR GREATER THAN AN AGGREGATE OF 1500 MW IN A SINGLE INTERCONNECTION. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(S) IDENTIFIED IN 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed "critical." The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comment. The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their</p>				

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<p>availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				
Shamus J Gamache	Central Lincoln PUD	4	Abstain	<p>Central Lincoln supports the following APPA CIP Task Force comments. If this issue is addressed as suggested, we will vote affirmative on the next ballot. The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1's Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA's reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-</p>

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				<p>002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5 shown in redline CAPS/strikeout: 1.4. Each Blackstart Resource identified in the RESTORATION PLAN FOR A Transmission Operator’s restoration plan serving load or generation equal to or greater than an aggregate of 1500 MW in a single Interconnection. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4. to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.”</p>
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator’s System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				

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Rick Syring	Cowlitz County PUD	4	Negative	<p>The APPA CIP Task Force has identified what we believe to be an unintended consequence – a Catch-22 – from the interaction of the revised CIP-002-4 Attachment 1’s Criteria 1.4 (Blackstart Resources) and 1.5 (identified Cranking Paths) with the control center size and facility exceptions in 1.15, 1.16 and 1.17. This interaction will cause many if not all registered TOPs, BAs and Generation Owners that control Blackstart Resources used in a TOP restoration plan to become subject to CIP-002 through CIP-009, regardless of entity size. EOP-005 requires all TOPs to have a restoration plan. APPA’s reading of EOP-005 indicates that each TOP must identify one or more Blackstart Resources. CIP-002-4 Criterion 1.4 requires a TOP to identify each such Blackstart Resource identified in its restoration plan as a critical asset. Criterion 1.5 requires the identification of certain Cranking Paths as critical assets. Criterion 1.15 requires that each generation control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for generation control center size (1500 MW). Criterion 1.16 requires each transmission control center or backup control center used to control a Cranking Path identified under Criterion 1.5 be identified as a critical asset, without any exception for TOP control center size. Criterion 1.17 requires each Balancing Authority control center or backup control center used to control a Blackstart Resource identified under Criterion 1.4 be identified as a critical asset, without any exception for Balancing Authority control center size (1500 MW). In effect, Criterion 1.4 swallows all exceptions created under 1.15 through 1.17, with the possible exception of a generation-only BA that does not have any Blackstart Resource obligations to its TOP. All vertically integrated utilities would be responsible for CIP-002 through CIP-009, including small BAs and TOPs that do not own any other Critical Assets. To address this problem, we propose the following edits to 1.4 and 1.5: 1.4. Each Blackstart Resource identified in the restoration plan for a Transmission Operator serving load or generation equal to or greater than an aggregate of 1500 MW in a single interconnection. 1.5. The Facilities comprising the Cranking Paths and meeting the initial switching requirements from the Blackstart Resource(s) identified in 1.4 to the first interconnection point of the generation unit(s) to be started, or up to the point on the Cranking Path where two or more path options exist, as identified in the Transmission Operator's restoration plan. This surgical approach ensures that generation, TOP and BA control centers with responsibility for other critical generation and transmission assets are still responsible for full CIP-002-4 through CIP-009 compliance. However, small BA/TOP</p>

Balloter	Company	Segment	Vote	Comment
				<p>systems with no initial obligations to the RC and larger TOPs for regional restoration would not be deemed “critical.” The experience of these smaller systems is that their restoration obligations have not been relied upon to restore the BES, but rather to start generation to serve local load after a system separation – and then to wait for direction from the RC on resynchronization with the rest of the BES, once voltage and frequency are stabilized. While we recognize that cyber events may have an impact on the availability of resources, the fundamental fact is the vast majority of Blackstart Resources and control centers will be protected under CIP-002 through -009, because they will be classified as Critical/High Impact under the proposed criteria, as revised above. Thus the revised criteria support rather than undermine the distinction between categorization of big iron/big aluminum resources and their associated control centers as Critical or High Impact in the development of CIP-002-4. The categorization and development of security controls for smaller resources as either medium or low impact for the BES, should be addressed through development of additional bright line criteria and associated security controls in the next phase of this project (CIP-002-5 or CIP-010/011.)</p>
<p><b>Response:</b> Thank you for your comment.                      The SDT carefully selected criteria around the NERC Glossary term Blackstart Resource and its derivation from EOP-005-2. The team feels that these resources are critically important in their function to restore the BES under blackstart conditions. As such, these assets deserve protection as Critical Assets. Due to their connectivity and configuration, control centers that operate these Blackstart Resources also have the ability to jeopardize their availability and function in a time of need if maliciously misused. As such, these control centers should also be deemed Critical Assets. The SDT appreciates the "catch-22" concern that was brought forth by APPA. However, the SDT does not believe that the criteria as written present a catch-22 scenario. A careful reading of EOP-005-2 indicates that those assets identified as Blackstart Resources are those needed to bring the shutdown area "to a state whereby the choice of Load to be restored is not driven by the need to control frequency or voltage." The APPA comments indicate that the assets of concern to them are being utilized "once voltage and frequency are stabilized." As such, these assets are not required to be included in the TOP's restoration plan as Blackstart Resources. Additionally, it should be noted that EOP-005-2 does not presume that Blackstart Resources are only those "located within the Transmission Operator's System." As such, smaller TOPs have the opportunity to coordinate with neighboring TOPs and the RC in the development of their restoration plan which may not necessarily identify Blackstart Resources in their own system. In light of these clarifications, the SDT does not believe that a catch-22 exists that would unnecessarily bring in all TOP/BA control centers regardless of size, but rather only those that have the potential to impact Blackstart Resources that are essential to BES restoration as identified through EOP-005-2.</p>				

