

Guideline for Setting Measures for Alberta Reliability Standards

Prepared for and intended for use by the AESO Reliability Committee (ARC) workgroups in setting Alberta reliability standards - June 2008.

Issue/Problem:

- NERC mandatory reliability standards are developed without the specificity needed to administer compliance. A consequence is that compliance authorities cannot determine compliance to a requirement effectively or efficiently, which results in problems for entities and compliance authorities. The solution is to develop measures for each requirement that can be effectively used to monitor compliance.

Background:

- Alberta mandatory reliability standards will include a measures section.
- Measures are included in Section C of the NERC standards model.
- Measures are used to communicate what data and information is collected and submitted by a reporting entity to the compliance authority to determine compliance to the requirement.

Purpose of the Document:

- To provide guidelines that are used by a rules owner to establish measures for technical requirements that can be used by AESO to effectively monitor compliance to the requirement.
 - Answer the question, "How can the AESO (in the role as the compliance monitoring authority) set measures that can assure our industry that established reliability standards and requirements have been met?"

Process Context:

- The rule owner that sets the requirement also sets the measures for the requirement.
- The compliance department provides the management and administrative processes to ensure consistent, timely, fair, and efficient monitoring and referral where required. The compliance department will do an initial compliance check on non-technical requirements (submission, completion, quality, process, etc.).
- The rule owner (technical business units) will determine compliance to the requirements where the requirement is technical. (This is different than the NERC model, where the NERC compliance teams are the technical experts that determine compliance.)

Some general considerations and questions to ask:

- Measures should be considered within the SMART model – Specific, Measurable, Achievable, Realistic, and Timely (to be considered in later pass).
- Does the measure give you the information you need to determine if a requirement is met?
- If a participant provided that information, what would you do with it to determine compliance to the requirement?
- How important is the requirement – does it warrant a lot of scrutiny or little less? (Importance considers the impact of not meeting this requirement – does it have a direct and consequential impact on reliability, an indirect impact on reliability, just an administrative impact, or other?)
- What level of detail is required to determine compliance?
- How will you process the data? Do you need it in a consistent format or structure?

- WECC compliance problems are a result of poor measures (e.g. entities provide unnecessary detail, don't know what to submit, WECC does not know what or how to analyze the data, result is a poor or invalid assessment, etc).

Specific

- Be specific to the requirement – what specific data or information proves to me that the requirement is met?
- Specify the level of detail that is acceptable – e.g. don't use words like 'demonstrate', but describe what that means. What will we accept as evidence that 'demonstrates' this has been done? Is a declaration that the entity is compliant sufficient? Do they have to have an independent report or audit done each year? Are complete records of their work efforts required? Do we need detailed records, such as a dump of database records to show changes made?
- If you are looking for 'completeness', what will show that? And how would you use this data to verify 'completeness'?
- If you are looking to see if a 'process' is followed, what will show that? Perhaps a process plan, evidence at particular key points in the process, signoff at the end by someone in authority?
- Metrics should be specific to the requirement and intent of the requirement. Does the submission of a 'training manual' sufficiently meet the intent of the requirement which states 'must have operators trained'? Or is there another measure that is better? Like a copy of the training process and list of operator test scores?

Measurable

- Rule owner should be thinking about what they will do with the data – how it will be checked for compliance, completeness, accuracy, etc.
- Best measures are simple, black and white – within a mathematical tolerance or requirement. Measures should include the mathematical data that allows you to make the assessment. Should be detailed enough not to be misinterpreted.
- Most measures are more subjective – requires a number of non-mathematical factors to be considered. A measure should request that data or evidence, so those factors can be considered in the assessment.
- Example - If we want a 'complete' error report, we could ask for a description of the process they are using to examine how they determine an event is an error. This can be reviewed for flaws. Could also ask for a report of events they did not consider as errors.

Achievable

- Consider if the measure is achievable or not. Can this data be provided without costs that exceed the benefits (industry) of compliance to the requirement? Consider how we use it.
- Alternative measures that meet the requirement are acceptable, as not all entities may have the same way to demonstrate they have met a requirement. These however, should be listed specifically, and not just referenced in a general or vague way.

Realistic

- Match the measures to the importance of the requirement. Those requirements that are not as important to monitor may not need to have as detailed measurements to demonstrate compliance. (e.g. If the requirement is to submit a 'manual' and we're not intending to review the manual in detail, maybe the measure is 'submit a letter of changes made to the manual and a brief reason of the changes made'.)
- The level of detail needs to match the level of the requirement. You don't really need highly specific measures for requirements that are vague. If there are general ways to demonstrate that a requirement is being met, that should be included.)
- In setting measures, it's important to consider what and how the compliance authority will use this information. If you can't see how the data will be considered in an assessment, you probably don't need to include it in a measure. (Think – if you get a 10,000 page document or data dump, do you have a way to work with this information to determine if the requirement was met?)
- Recognize that alternatives exist where the preferred measure can't be provided. Identify these specifically. (e.g. An entity doesn't have manually signed off 'relay testing sheets' because they went 'automated', but they do have 'electronic spreadsheets of the relays tested and a letter declaring that the data provided is accurately represented'.)
- Don't ask for more data than is needed to normally assess compliance. (If more information is needed in a specific case, it can be requested for where abnormalities exist.)

Timely

- **Note – this quality will be included in the standards when the compliance monitoring program is established. The compliance monitoring program will consider factors that will promote efficiency and consistency in reporting on measures. Workgroups do not need to consider TIMING in the first pass of standards assessment.**
- *Need to consider when you want the data provided – what time period is important, when decisions are made on the data, etc. (e.g. If decisions are made on this quarterly, an annual submission probably won't work)*
- *Days – if it's important to the requirement, make the distinction between 'business days' and 'calendar days', or 'annually' vs. 'at the end of the year'.*
- *Planned events – don't use terms like 'periodic', 'regularly', etc. Use more specific timing like 'monthly', 'quarterly', 'annually', 'at the end of each month', 'on the 15th of the month', 'at the end of the year', 'minimum of 12 months since the last submission', etc.*
- *Event driven timing – don't use terms like 'in a timely manner', 'immediately following an event', 'when available', etc. Use more specific timing like 'within 3 calendar days of an event', '30 calendar days in advance of', etc. (Also need to be clear what an 'event' is.)*

Example of Establishing Measures for a Requirement (From FAC-003-1 Transmission Vegetation Management Program)

Alberta Requirement AR1 is defined as:

The TFO and ISD shall prepare, and update at least annually, a formal transmission vegetation management program (TVMP). The TVMP shall include the TFO's and ISD's objectives, practices, approved procedures, and work specifications.

In setting measures for this requirement, the workgroup would consider questions like:

1. How would you show that TVMP has been prepared?
2. How would you show that the TVMP is updated at least annually?
3. How would you show that the plan is formally accepted by the TFO/ISD?
4. How would you show that the TVMP includes the required sections?
5. etc.

Possible measures could be the following:

1. Submit a self certification form indicating compliance to the requirement.
2. Submit only changes to the TVMP annually.
3. Submit the TVMP red lined changes annually.
4. Submit a TVMP revision history.
5. Submit the TVMP for review annually.
6. Submit an independent review of the TVMP.
7. etc.

In selecting which measures would be appropriate, consider and balance:

1. How important is the requirement? (If there is a direct consequence of not following the requirement, the measure should be very tight and detailed. If there is an indirect and administrative consequence of not following the requirement, the measure can be less detailed.)
2. What effort is required to produce the data for the measure? (Keep it as efficient as possible for the industry as a whole.)
3. What will the compliance authority do with the data and information it receives from the measures?
4. Does the measure demonstrate that the requirement is met to the extent necessary?
5. etc.

Establish the measure and include it in the standard.

For the Compliance Section of the Standard (established by the Compliance Work Group):

Monitoring mechanisms:

Once the measure is established, the Compliance Monitoring Program (under development) may monitor this requirement by using mechanisms (as example only):

1. Full or spot audit of the requirement every 6 years
 - a. Review of the TVMP document for completeness and content
 - b. Record of annual updates done
2. Spot audit of the requirement
3. Annual submission of self-certification
4. Event triggered audits (e.g. ROW inspections)

Data Retention:

Data to be retained will be identified and the period which it needs to be retained will be stated.

Monitoring Authority:

Establishes who the compliance authority responsible for monitoring is.