

## BAL-502-RFC-01 Mapping to Proposed BAL-502-RFC-02

### BAL-502-RFC-01 Requirements

### BAL-502-RFC-02 Requirements

R1	The Loss of Load Expectation (LOLE) for any load in RFC due to resource inadequacy shall not exceed one occurrence in ten years. This requirement applies to all PRSGs within RFC	R1.1	Calculate a Planning reserve margin that will result in the sum of the probabilities for loss of Load for the integrated peak hour for all days of each planning year analyzed (per R1.2) being equal to 0.1. (This is comparable to a “one day in 10 year” criterion)
R2	Each LSE		
R2.1	shall be a member of a PRSG for determining its resource planning reserve requirements. Membership in PRSGs must recognize interconnected system arrangements and are subject to verification by RFC.		
R2.2	shall report to RFC within 90 days of the effective date of BAL-502-RFC-01 which PRSG is responsible for determining its resource planning reserve requirements. In addition, if a LSE changes the PRSG that is responsible for determining its resource planning reserve requirements, the LSE shall notify RFC at least 90 days prior to the proposed change or 180 days prior to the planning period under review, whichever is greater.		
R3	Resource Planning Reserve Requirement analyses performed by each PRSG shall:		
R3.1	be performed or verified annually	R1	The Planning Coordinator shall perform and document a Resource Adequacy analysis annually. The Resource Adequacy analysis shall [Violation Risk Factor: Medium]:
		R1.2.1	Perform an analysis for Year One.
		R1.2.2.1	Perform an analysis or verification at a minimum for one year in the 2 through 5 year period and at a minimum one year in the 6 though 10 year period.
R3.2	express resource planning reserve requirements as a percentage of the 50:50 probability forecast peak load (Reserve Margin).	R1.1.2	The planning reserve margin developed from R1.1 shall be expressed as a percentage of the median forecast peak Net Internal Demand (planning reserve margin).
R3.3	determine a resource planning reserve requirement for each of the PRSG members for the upcoming planning year as defined by the PRSG.	R1.1	Calculate a planning reserve margin that will result in the sum of the probabilities for loss of Load for the integrated peak hour for all days of each planning year analyzed (per R1.2) being equal to 0.1. (This is comparable to a “one day in 10 year” criterion).

Applicability section has been modified to include the Planning Coordinator. LSE has been removed from the Applicability section

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R1.2.1	Perform an analysis for Year One.
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R3.4	be performed or verified for the nine subsequent planning years to provide information for long-term resource planning without establishing specific resource planning reserve requirements
R3.5	model a “loss-of-load event” as system conditions before taking emergency actions (e.g. unplanned voltage reductions or public appeals) but including system conditions subsequent to taking planned contractual actions (e.g. direct control load management).
R3.6	consider the availability of all generating units within the PRSG committed to meet the adequacy of Group load. At a minimum, the calculations must consider the following characteristics of the generating unit population:
R3.6.1	Historic generating unit performance and any projected changes
R3.6.2	Generating unit seasonal ratings
R3.6.3	The population of units deemed “typical” for compiling the history to determine generating performance statistics for new units
R3.6.4	Projected planned generator outages and maintenance schedules
R3.6.5	Fuel limitations, wind or hydro energy limitations or other reasons for limited dispatchability of generators

R1.2	Be performed or verified separately for each of the following planning years:
R1.2.2	Perform an analysis or verification at a minimum for one year in the 2 through 5 year period and at a minimum one year in the 6 through 10 year period.
R1.6	Document that capacity resources are appropriately accounted for in its Resource Adequacy analysis
R1.1.1	The utilization of Direct Control Load Management or curtailment of Interruptible Demand shall not contribute to the loss of Load probability.
R1.4	• Any other demand (Load) response programs not included in R1.3.1
R1.3.2	• Historic resource performance and any projected changes
R1.4	• Sensitivity to resource outage rates .
R1.3.2	• Seasonal resource ratings
R1.3.2	• Resource planned outage schedules, deratings, and retirements.
R1.3.2	• Modeling assumptions of intermittent and energy limited resource such as wind and cogeneration.
R1.4	• Availability and deliverability of fuel.
R1.4	• Impacts of extreme weather/drought conditions that affect unit availability.

Requirement in BAL-502-RFC-01 not explicitly included in BAL-502-RFC-02

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R3.6.6	Common mode outages that effect resource adequacy
R3.6.7	Availability of Resources with Environmental or Regulatory Restrictions
R3.7	consider the characteristics of other resources within the PRSG committed to meet the adequacy of Group load. At a minimum, the calculations must consider the following:
R3.7.1	Limitations such as notice, buy-through provisions, duration, or frequency
R3.7.2	How it is dispatched
R3.7.3	Physical characteristics such as weather, cold load pickup, etc
R3.8	consider the characteristics of load, such as the following:
R3.8.1	Load diversity
R3.8.2	Seasonal load variation
R3.8.3	Load variability due to weather, regional economic forecasts, etc.
R3.8.4	Load forecast uncertainty
R3.8.5	Contractual arrangements concerning load shedding agreements among PRSG members
R3.9	shall base the LOLE calculation on a methodology employing the sum of the daily loss of load probabilities

R1.4	· Common mode outages that affect resource availability
R1.4	· Environmental or regulatory restrictions of resource availability.
R1.3.1	· Load diversity.
R1.3.1	· Seasonal Load variations.
R1.3.1	· Median (50:50) forecast peak Load.
R1.3.1	· Load forecast uncertainty (reflects variability in the load forecast due to weather and regional economic forecasts).
R1.3.1	· Daily demand modeling assumptions (firm, interruptible).
R1.3.1	· Load forecast uncertainty including Load variability due to weather and regional economic forecasts.
R1.3.1	· Contractual arrangements concerning curtailable/Interruptible Demand.
R1.1	Calculate a Planning reserve margin that will result in the sum of the probabilities for loss of Load for the integrated peak hour for all days of each planning year analyzed (per R1.2) being equal to 0.1. (This is comparable to a “one day in 10 year” criterion).

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R3.10	consider the benefit of interconnections to other entities outside the PRSG recognizing transmission limitations and the likelihood of capacity resources being available to the PRSG when needed
R3.11	documentation of the consideration for each of the items in R3.1 through R3.10 must be provided.
R4	Each PRSG shall document that it has an agreement to enforce the requirement of R3.3 on its LSE members.
R5	Each LSE shall secure the resources needed to meet the resource planning reserve requirement established by a PRSG for the upcoming planning year.
R6	The consideration of any resources within the PRSG not committed to serving the capacity needs of the Group that are included as resources in the calculation of required reserve levels or accepted as resources used to meet requirements must be specifically justified and documented

R1.3.2	· Modeling assumptions of firm capacity purchases from and sales to entities outside the Planning Coordinator area
R1.3.4	Assistance from other interconnected systems including multi-area assessment considering Transmission limitations into the study area.
R1.3	Include the following subject matter and documentation of its use:
R1.4	Consider the following resource availability characteristics and document how and why they were included in the analysis or why they were not included:
R1.4	· Market resources not committed to serving Load (uncommitted resources) within the Planning Coordinator area.

Requirement in BAL-502-RFC-01 is deleted as non-enforceable

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R1.3.2	· Criteria for including planned resource additions in the analysis
R1.3.3	Transmission limitations, including the effect of firm commitments that prevent the delivery of generation reserves
R1.3.3.1	Criteria for including planned Transmission Facility additions in the analysis
R1.4	· Modeling assumptions for emergency operation procedures used to make reserves available.
R1.5	Consider Transmission maintenance outage schedules and document how and why they were included in the Resource Adequacy analysis or why they were not included
R1.5	· Transmission maintenance outage schedules.

Added requirement expressly identified in BAL-502-RFC-02

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BAL-502-RFC-01 Requirements

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R1.7	Document that all Load in the Planning Coordinator area is accounted for in its Resource Adequacy analysis
R2	The Planning Coordinator shall annually document the projected Load and resource capability, for each area or Transmission constrained sub-area identified in the Resource Adequacy analysis [Violation Risk Factor: Medium].
R2.1	This documentation shall cover each of the years in Year One through ten.
R2.2	This documentation shall include the Planning Reserve margin calculated per requirement R1.1 for each of the three years in the analysis.
R2.3	The documentation as specified per requirement R2.1 and R2.2 shall be publicly posted no later than 30 calendar days prior to the beginning of Year One.

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