

PJM Manual 19: Load Forecasting and Analysis, Revision 38 Periodic Review

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Resource Adequacy Planning

Markets & Reliability Committee
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- Cover to Cover Periodic Review
- Administrative Updates throughout the Manual
 - Section 3.1 updated forecast horizon from 15 to 20 years
 - Updated formula printing issues in Section 3.2 and Attachment C
 - Minor revisions to correct grammar, spelling, and punctuation

Formula cleanup example Attachment C

The number of locations in the sample is then calculated as follows, unless otherwise approved by PJM:

n = number of sampled customers in variance study, ≥ 75

$X_{i,t}$ = meter reading for customer i during interval t

Calculate the mean and variance of the meter data across all customers for each interval:

$$\text{Mean}(X_t) = \frac{1}{n} \sum_{i=1}^n X_{i,t}$$

$$\text{Var}(X_t) = s_{X_t}^2 = \frac{1}{n} \sum_{i=1}^n (X_{i,t} - \text{Mean}(X_t))^2$$

Calculate the sample size necessary to get 10% error at 90% confidence for each interval:

$$M_t = \left(\frac{Z_{\alpha/2} s_t}{e} \right)^2$$

Where

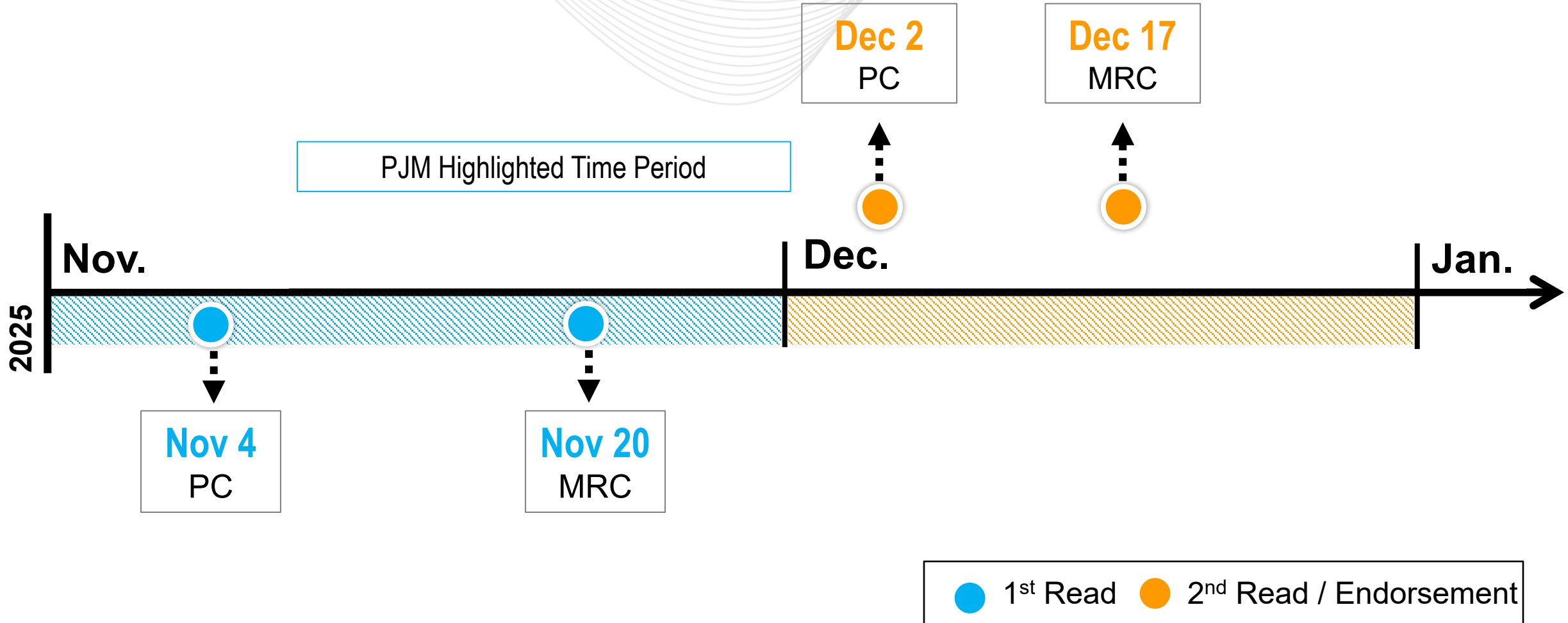
$Z_{\alpha/2} = 1.645$ = critical value at 90% confidence ($\alpha = 0.1$)

$e = 0.1$ = error

Take the average sample size across all intervals to determine M , the sample size:

$$M = \frac{1}{T} \sum_{t=1}^T M_t$$

Review/Endorsement Timeline



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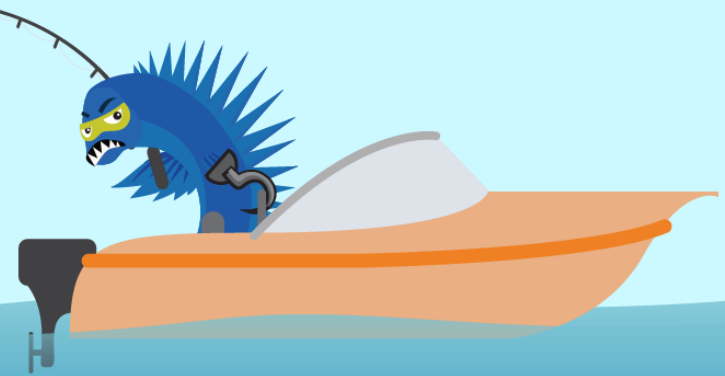
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