

# Major Event/Abnormal/Normal Event Definition

Webex Meeting  
March 12, 2002

# Topics

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- Sigma Method
- Beta Method
  - ▶ 3, 2.5 Beta...
- Member Results
- Next Steps

# Sigma Method

- See previous presentations and our web page.
- Main Issue
  - ▶ Not equitable because the mean and standard deviation of the daily reliability are used to set the threshold, rather than mean and standard deviation of the natural log of the daily reliability.

# Beta Method

- Using five years of data (or as many as you have up to five).
- Create columns of data with date, year, CMI per day, and SAIDI per Day. Also include the customers served.
- Order the SAIDI/Day from Highest to Lowest
- Calculate the natural log (LN function) of each value.  $\ln(\text{SAIDI/day})$

# Beta Method

- Calculate the mean (a) (AVERAGE function) and standard deviation (b) (STDEV function) of the natural log values.
- Find the threshold by  $e(a + 3b)$  (EXP function).
- For the following year of data, segment the days above the threshold into the abnormal group.

# Other Issues

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- Use the Lowest Value on Zero Days
- By Company, OpCo, Region

# Member Results

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- Did it work for you?
- How many days were classified as abnormal using
  - ▶ 3 Beta?
  - ▶ 2.5 Beta?
  - ▶ Your existing method?
- Concerns/Issues?

# Other Issues

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- Segmentation of Extreme Storms
  - ▶ 6 sigma
  - ▶ Named Storms?
  - ▶ Other approach?
- Abnormal-Abnormal?

# Next Steps

- Create material for use with management, commissions, public, other utilities.
  - ▶ Power points
  - ▶ Word documents – papers for IEEE
- Task Force needs to address other definitions:
  - ▶ Customer
  - ▶ Step Restoration – Jim Cheney
- Re-Ballot the Guide