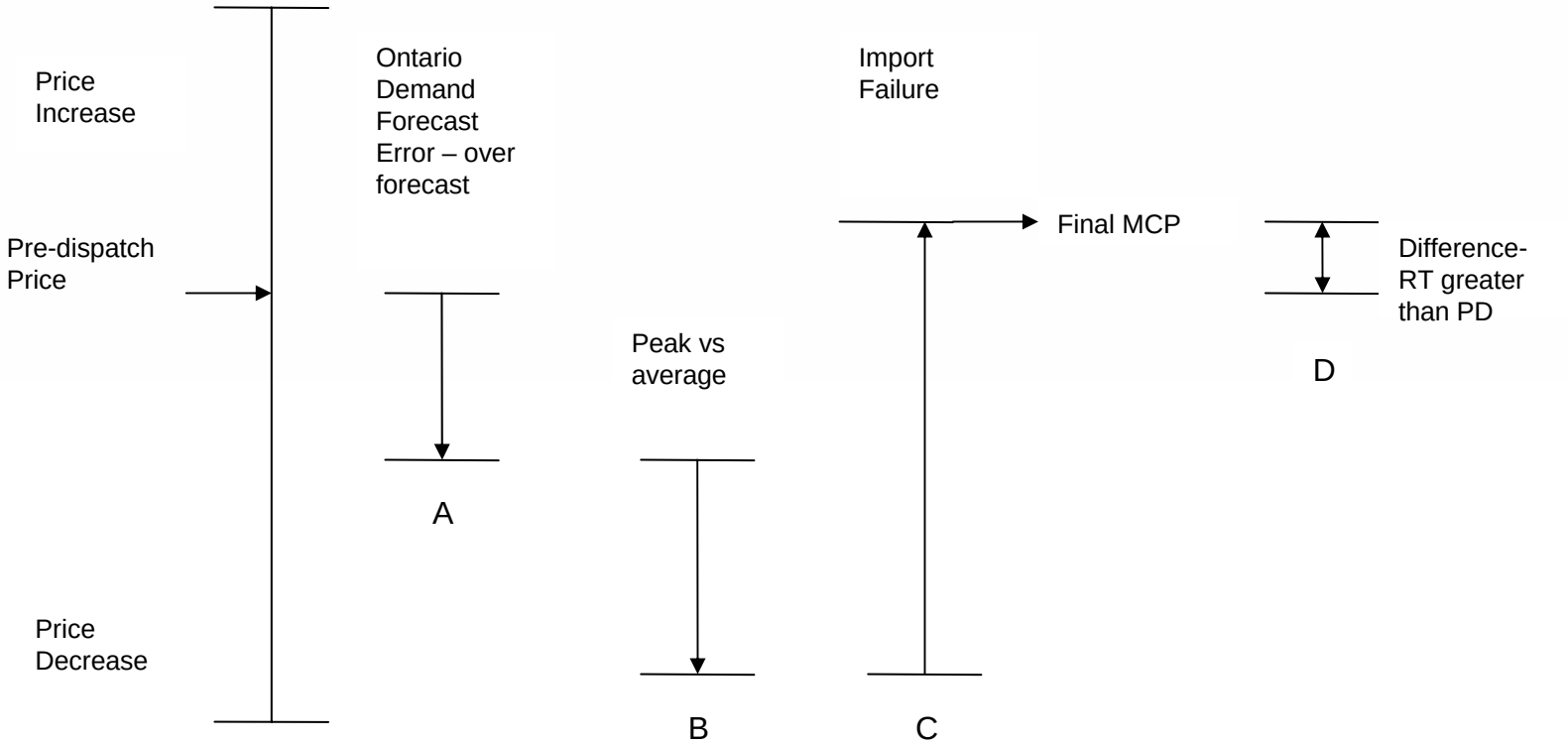
ieso
Power to Ontario.
On Demand.

Real Time Transaction Failure Charge – Import and Export Adjustment Factor - Analysis

For Discussion Purposes only- February 9, 2006

Contributors to Pre-dispatch to Real time Price differences



For any interval there are many possible combinations of contributors to Pre-dispatch to real time differences

Contributors are either supply stack changes or demand stack changes

eg. transaction failures, Peak vs Average, generator capacity and load consumption changes.

Adjustment Factor -Rule

Chapter 9, section 3.8C.7,

- The price bias adjustment factor shall compensate for **systematic** differences between the pre-dispatch and real time price eg. peak vs. average Ontario demand forecast
- Rule limits what the adjustment factor will compensate for.
- Applied to both the import and the export charge
- The following proposal is an interim approximation until such time as the IESO can technically isolate the effect of this systematic differences

Purpose of Formula

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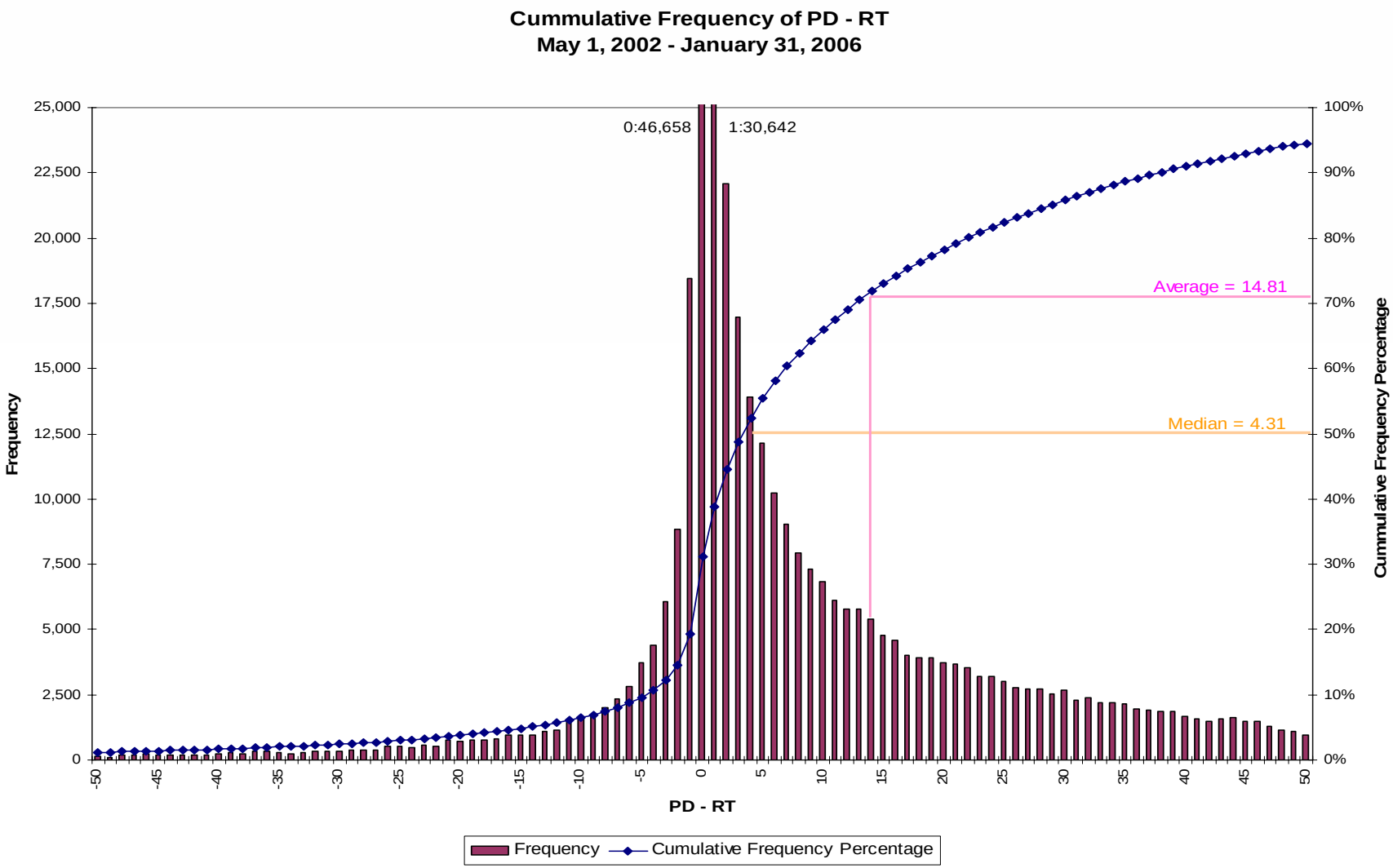
- Charge is constructed to trigger when there is harm to the market that can be attributed to the transaction failure
- During times of when the market impact of the failure is not significant (small price spreads) the charge should not trigger and during times of significant price spreads the formula should trigger a charge

Distribution of PD – RT Differences



Adjust for frequency or magnitude?

- Median
  - Selection of the median will equalize the probability (frequency) of the charge triggering for either an export or an import charge
  - The magnitude of the charge is reduces by the adjustment factor for export charges and increased by the adjustment factor for import charges

Trading Failure Rates

Exports

Off peak 3.91%

On peak 2.95 %

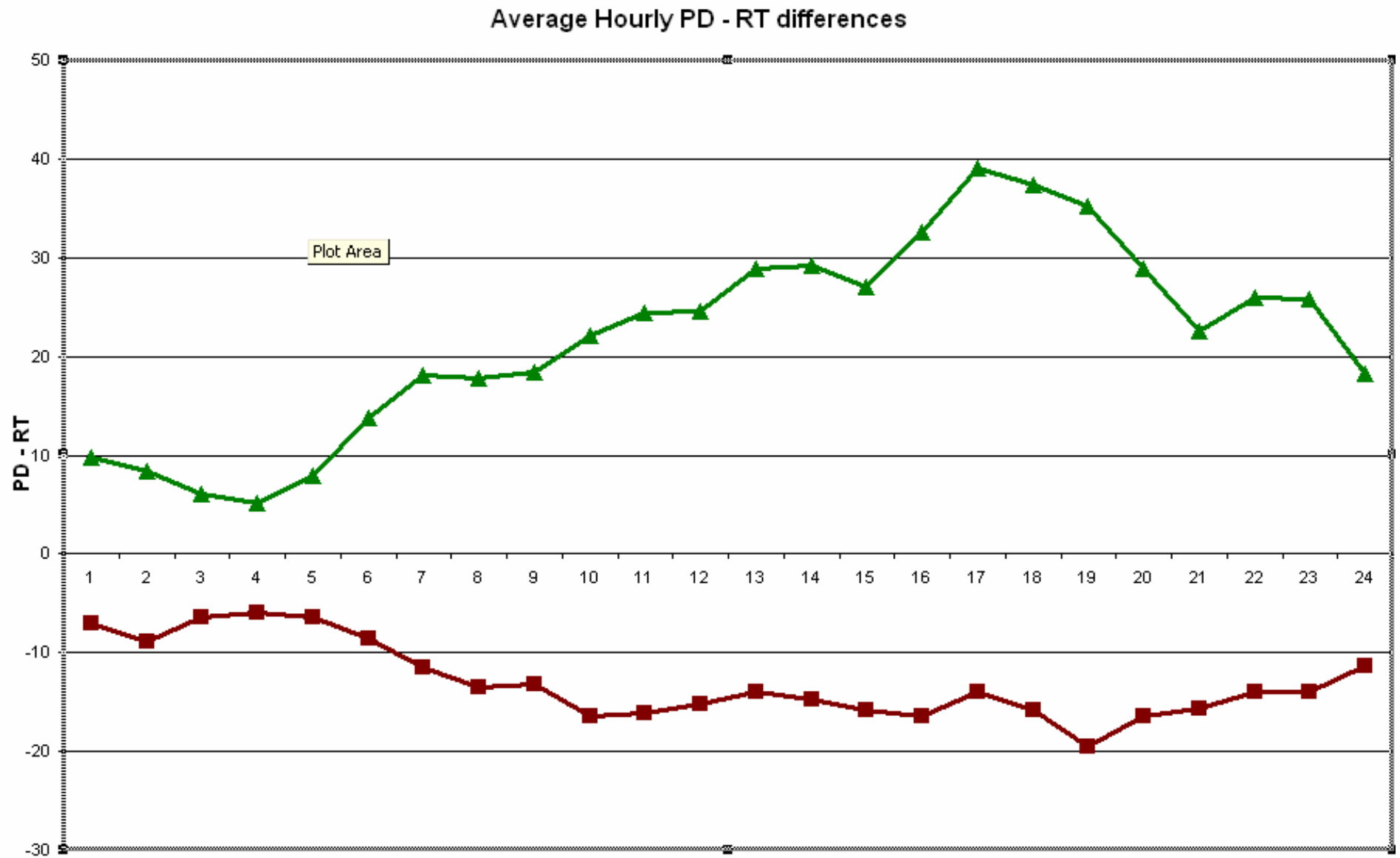
Imports

Off peak 1.35 %

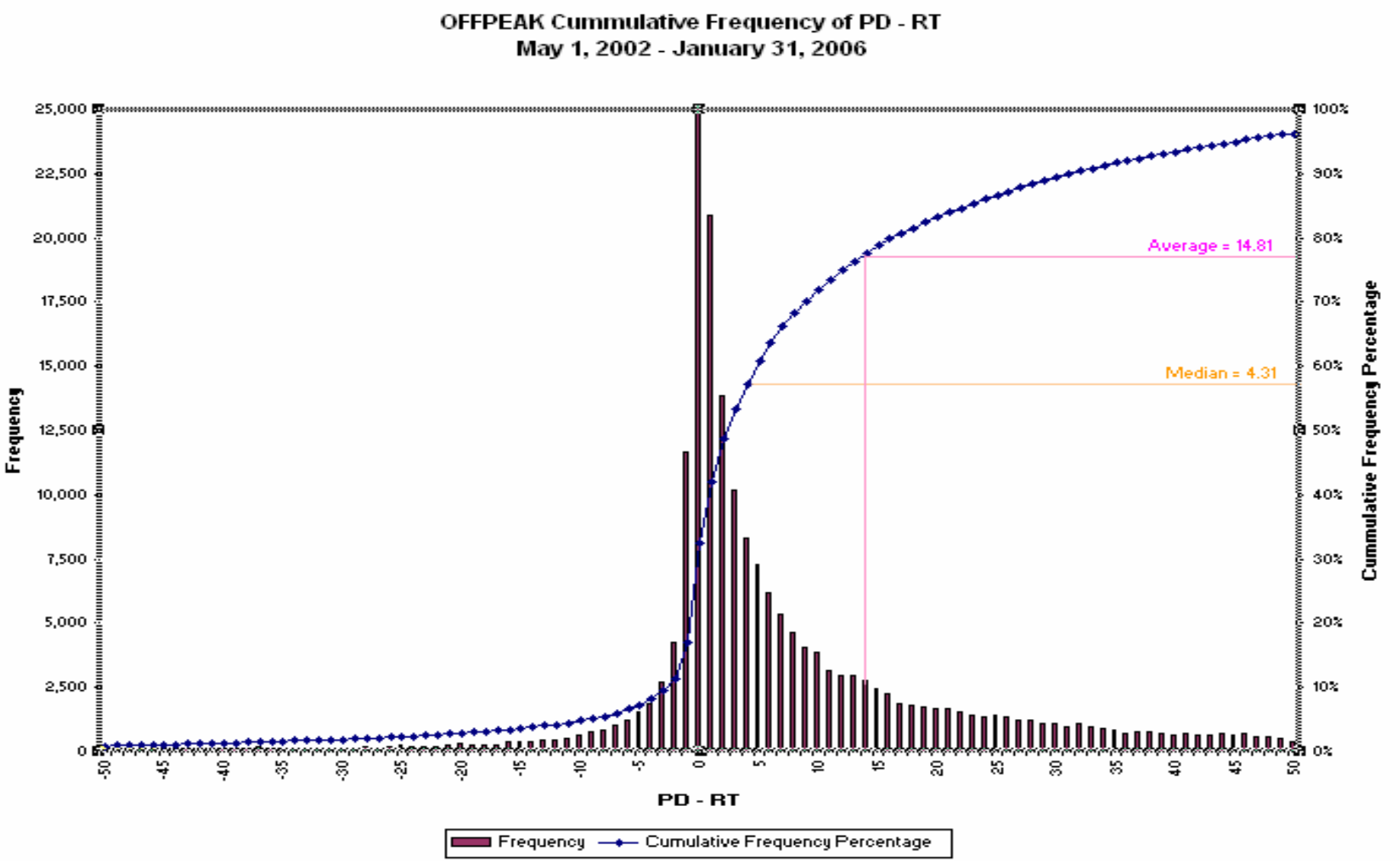
On peak 1.86 %

- Higher Failure rates on export for all hours of the day
- Failure rate = MWh failed for other than ”bona fide reasons”/ total traded MWh

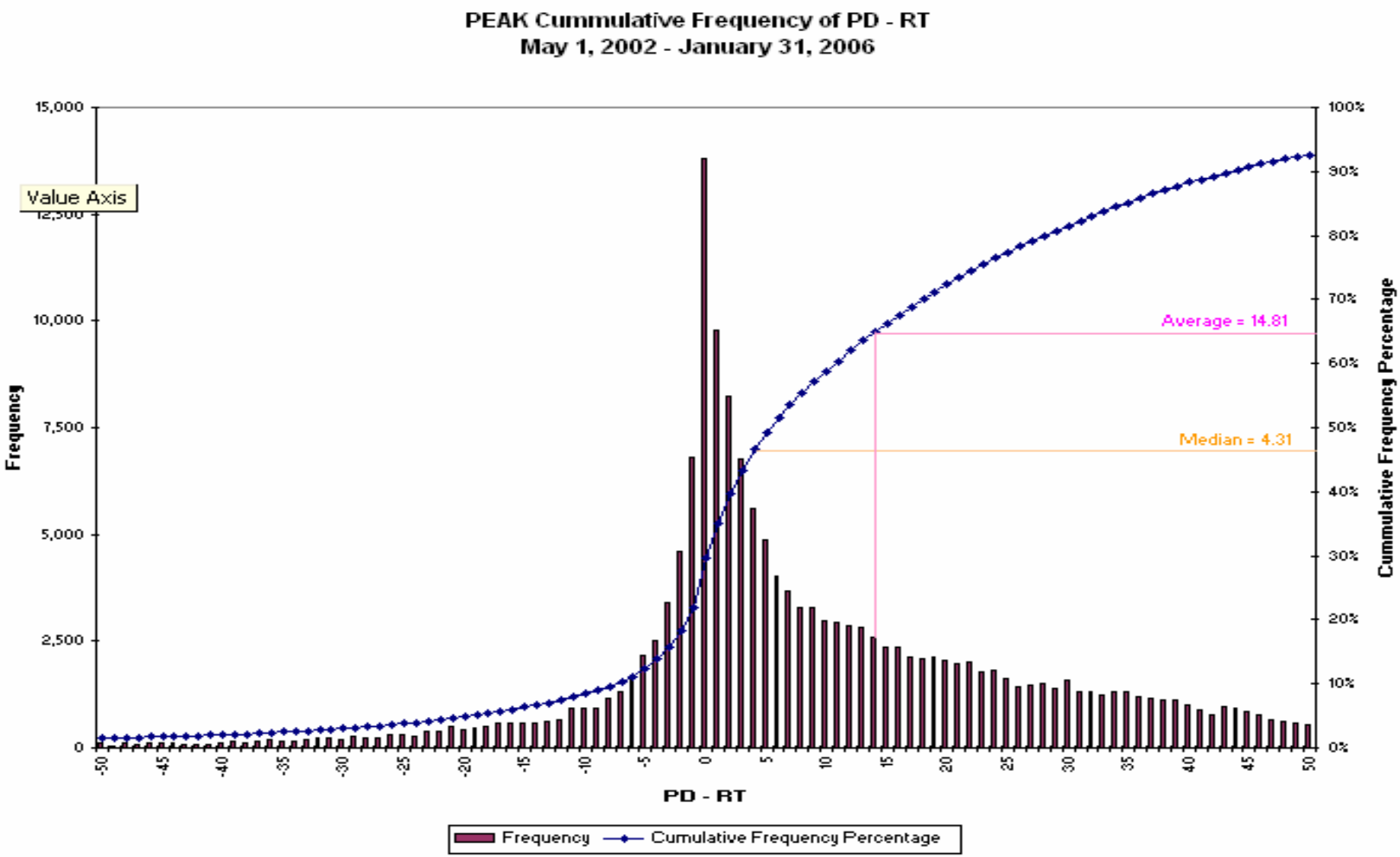
Average hourly PD-RT differences



Off Peak – PD-RT differences



On Peak – PD-RT differences



Application of Charge using Median

Off Peak Exports Failures

Probability of application of charge ~43%

Off Peak Imports Failures

Probability of application of charge ~57%

On Peak Exports Failures

Probability of application of charge ~47%

On peak Import Failures

Probability of application of charge ~53%

- If we accept the principle that the adjustment factor should equalize the probability of the import and export charge triggering, the data drives use to the conclusion that different factors for on peak and off peak are required to target times with highest failure rates

Next Steps

Analysis of factors:

Seasonal?

Off peak /On Peak

Comments from stakeholders on this material but in particular on-peak/off peak factors to enable the IT development to proceed