How current TLAF Methodology is not fit for purpose

Presentation to RAs Workshop on TLAFs

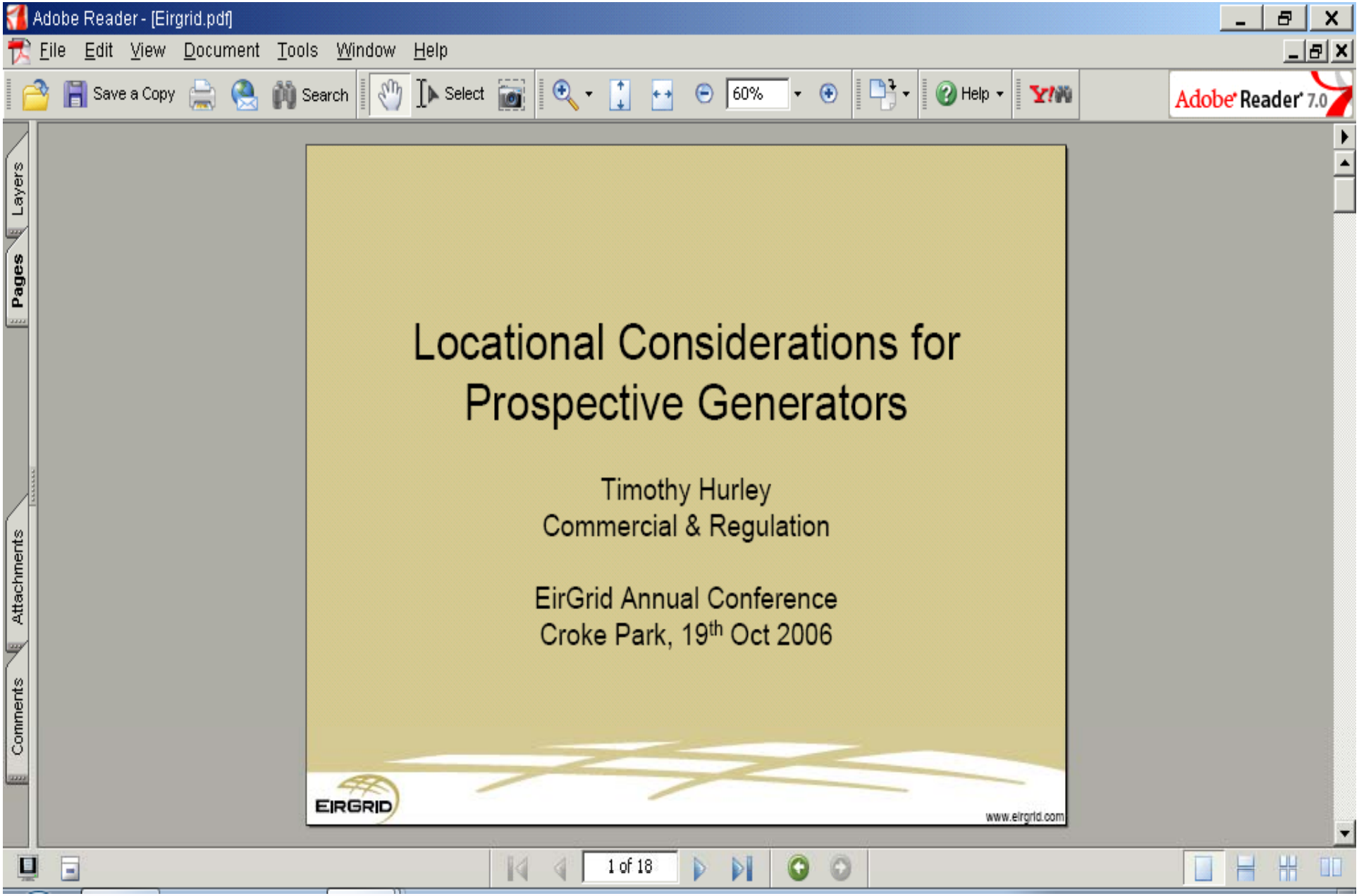
26 July 2010

Presentation

- Background
  - Locational Signals
- Impact on Cork Generators
- Report on Actual System Losses
  - Study methodology
  - Results & Findings
- Overview of all-island attributed losses
- Conclusions

Background

- Plant located in Aghada in response to clear locational signals
  - EirGrid signalled that additional generation needed in Cork
  - Having fully committed, the locational signals changed dramatically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Locational Considerations for Prospective Generators
Timothy Hurley
Commercial & Regulation
EirGrid Annual Conference
Croke Park, 19th Oct 2006
EIRGRID
www.eirgrid.com
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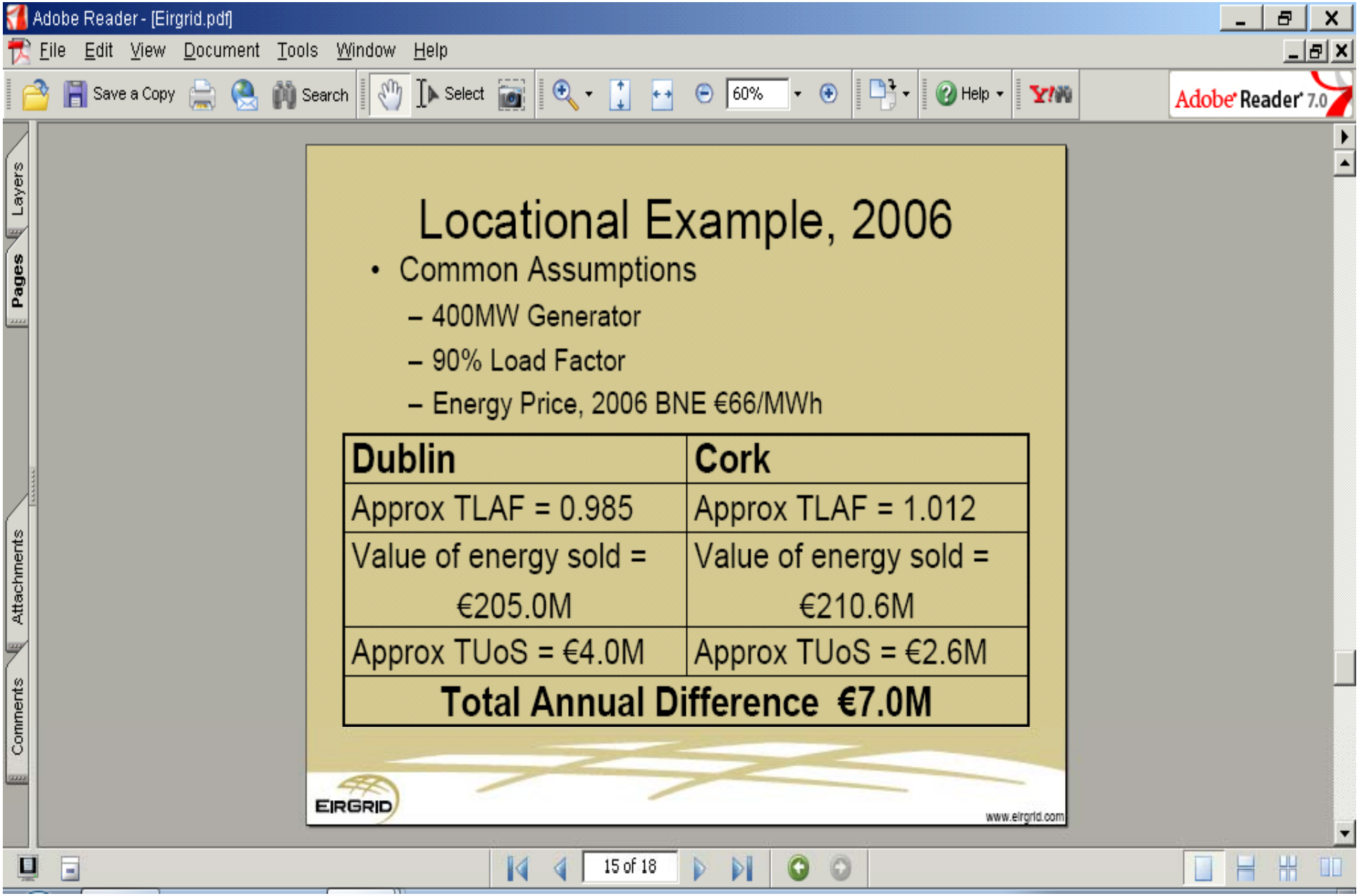
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Locational Example, 2006
• Common Assumptions
– 400MW Generator
– 90% Load Factor
– Energy Price, 2006 BNE €66/MWh
Dublin
Cork
Approx TLAF = 0.985
Approx TLAF = 1.012
Value of energy sold = €205.0M
Value of energy sold = €210.6M
Approx TUoS = €4.0M
Approx TUoS = €2.6M
Total Annual Difference €7.0M
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Magnitude of Volatility in Cork

2007 Winter Day TLAF	2010 Winter Day TLAF
1.044	**0.917**
TLAF when committed	**TLAF when connected**

Report on Actual System Losses

- ESB believes indicated impact is not warranted
- Report commissioned with the objective:

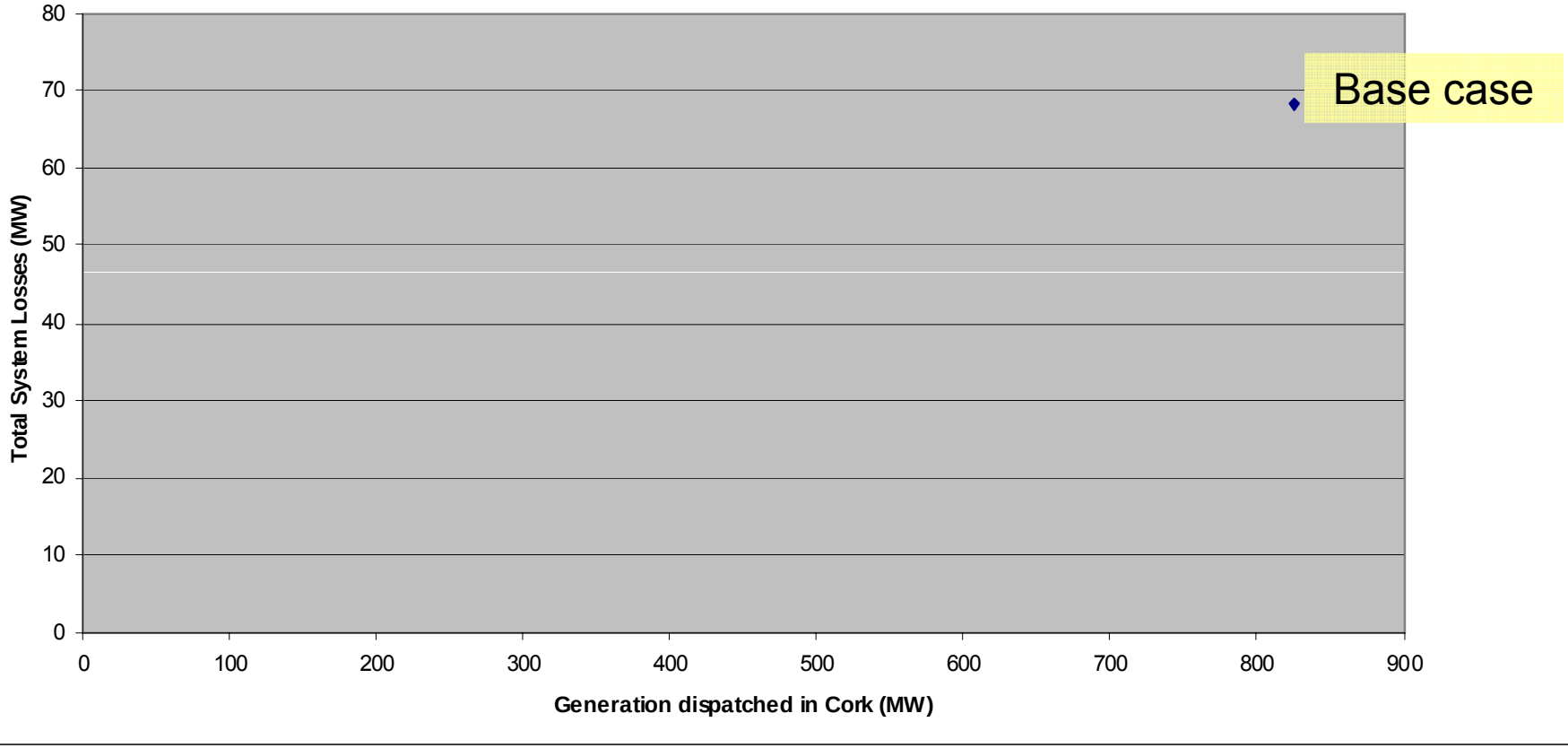
To establish true impact of new Cork Generation on system losses in Ireland

- Report demonstrates unequivocally that impact is not credible.

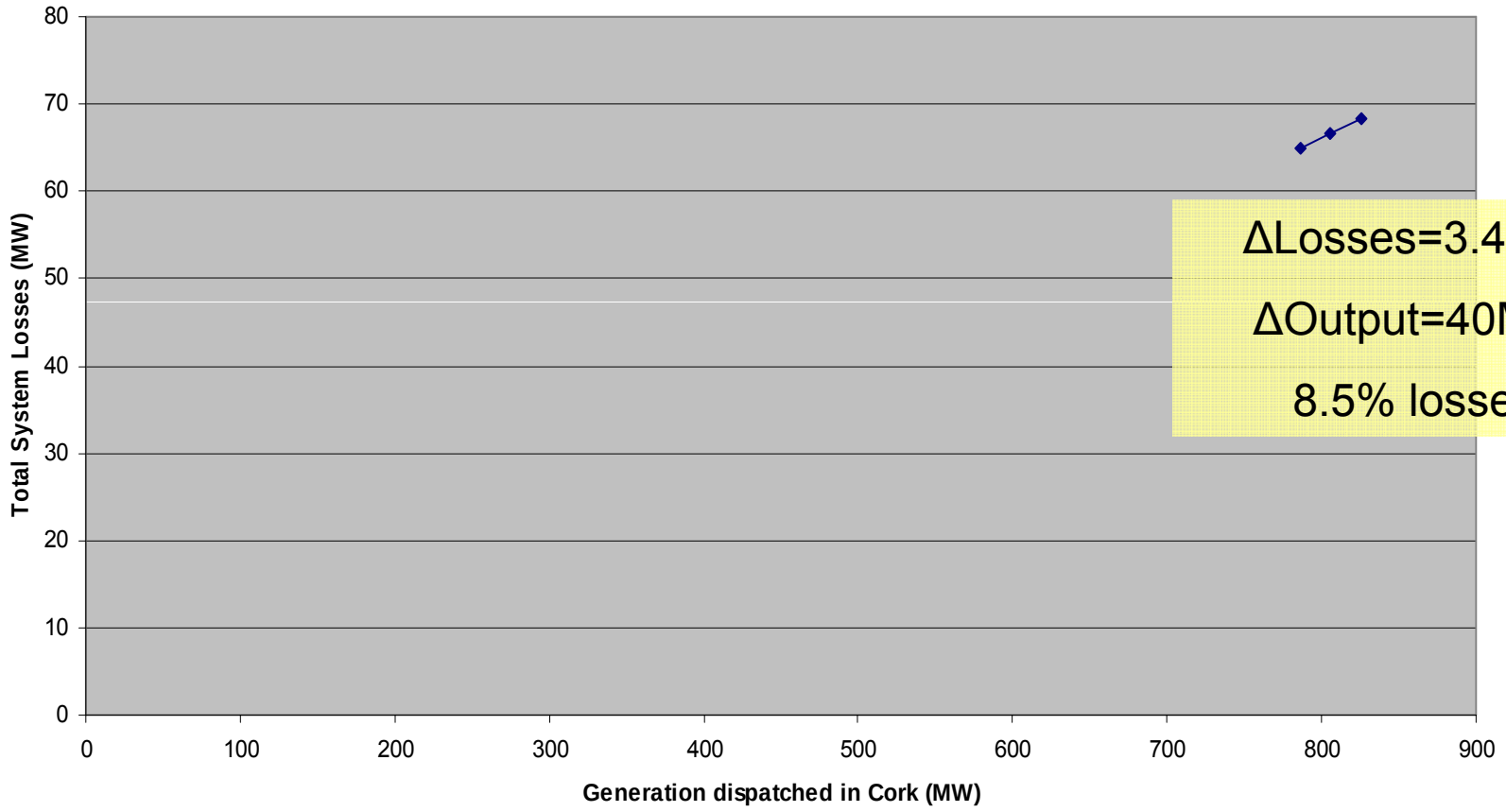
Study Methodology

- Data and assumptions in line with standard TSO practice
- PSS/e loadflow studies
- AD2/BGE output reduced in 20MW steps
- Alternative Generation brought on
- System losses established

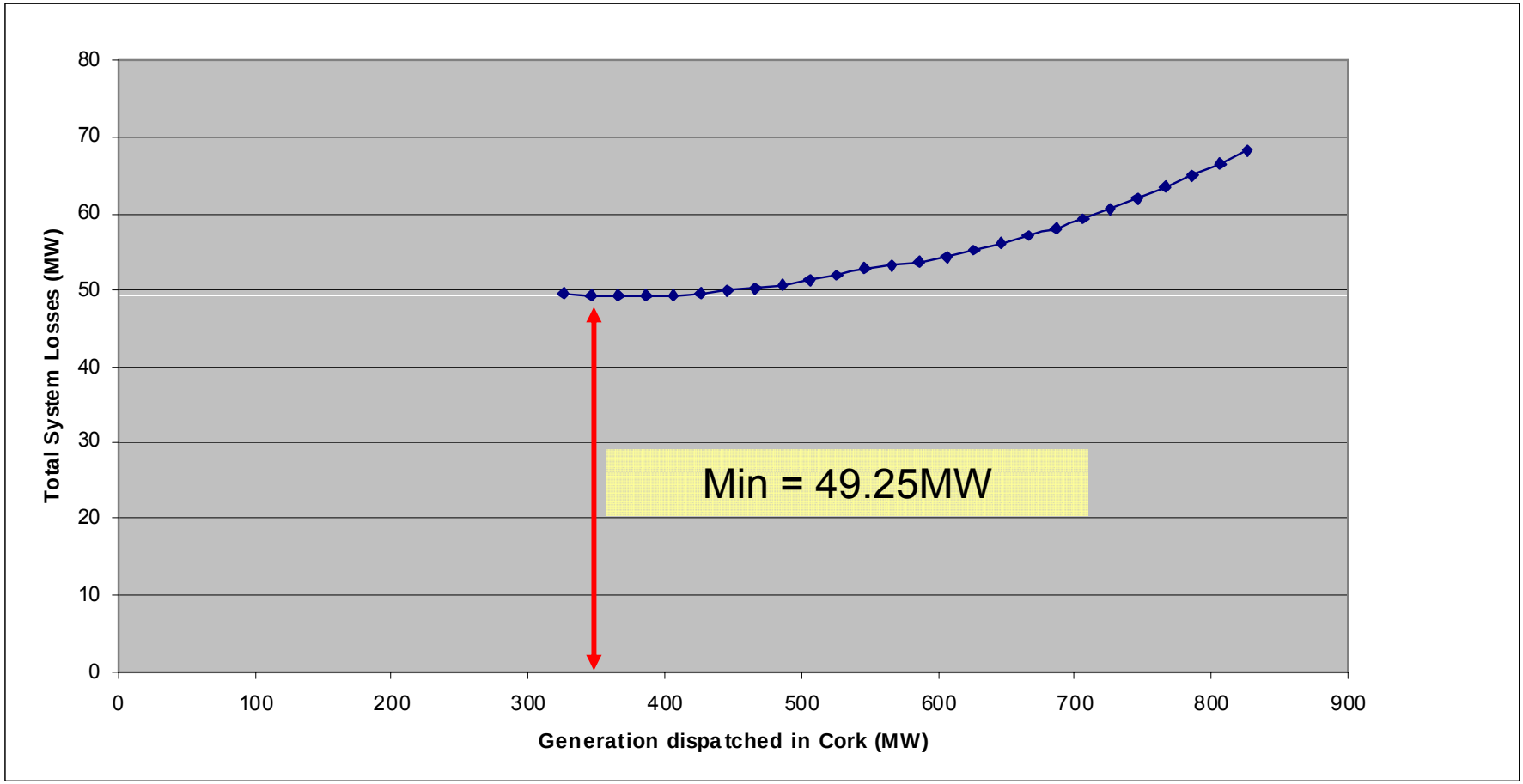
Total System Losses (MW)



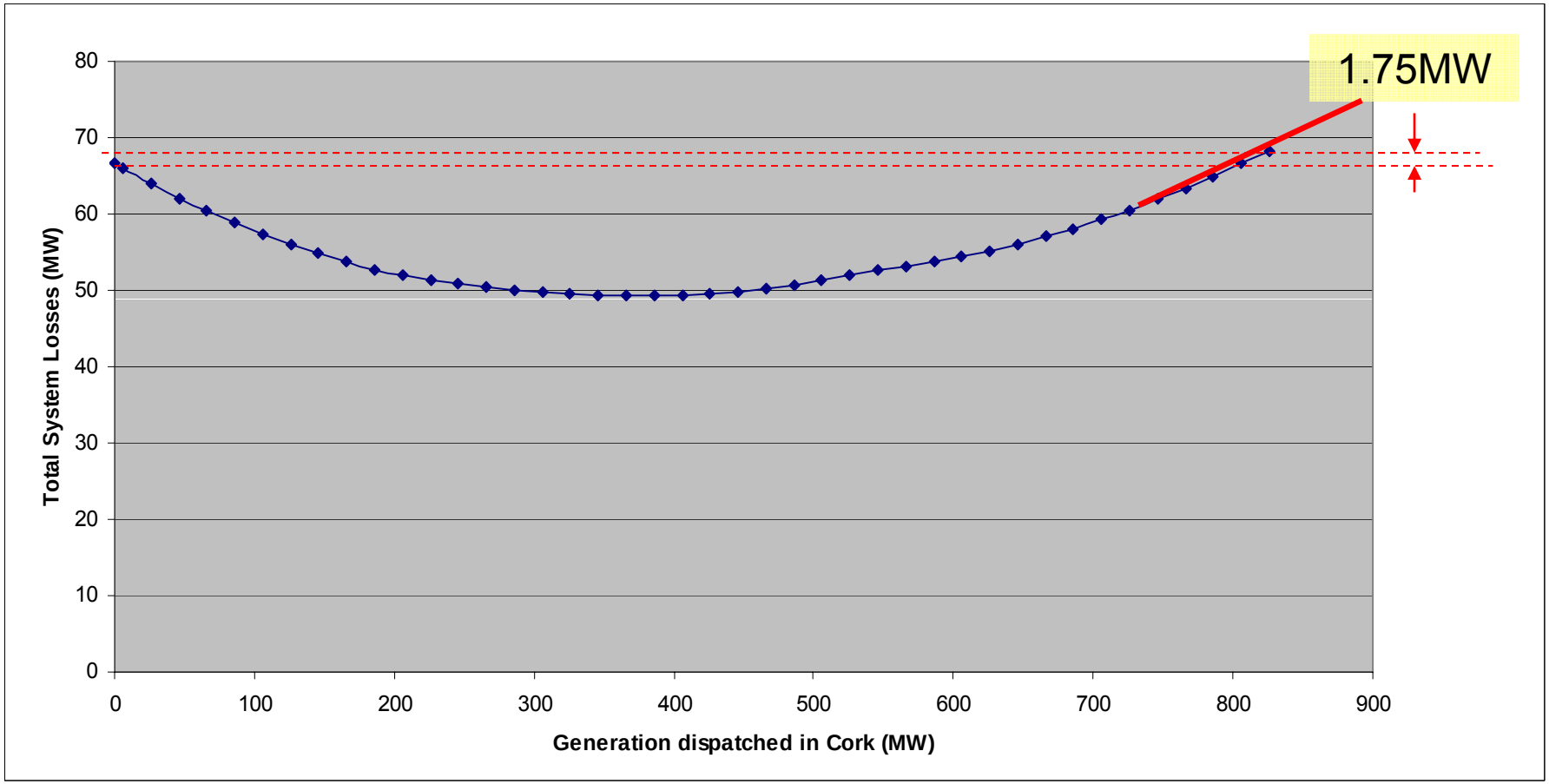
Total System Losses (MW)



Total System Losses (MW)



Total System Losses (MW)



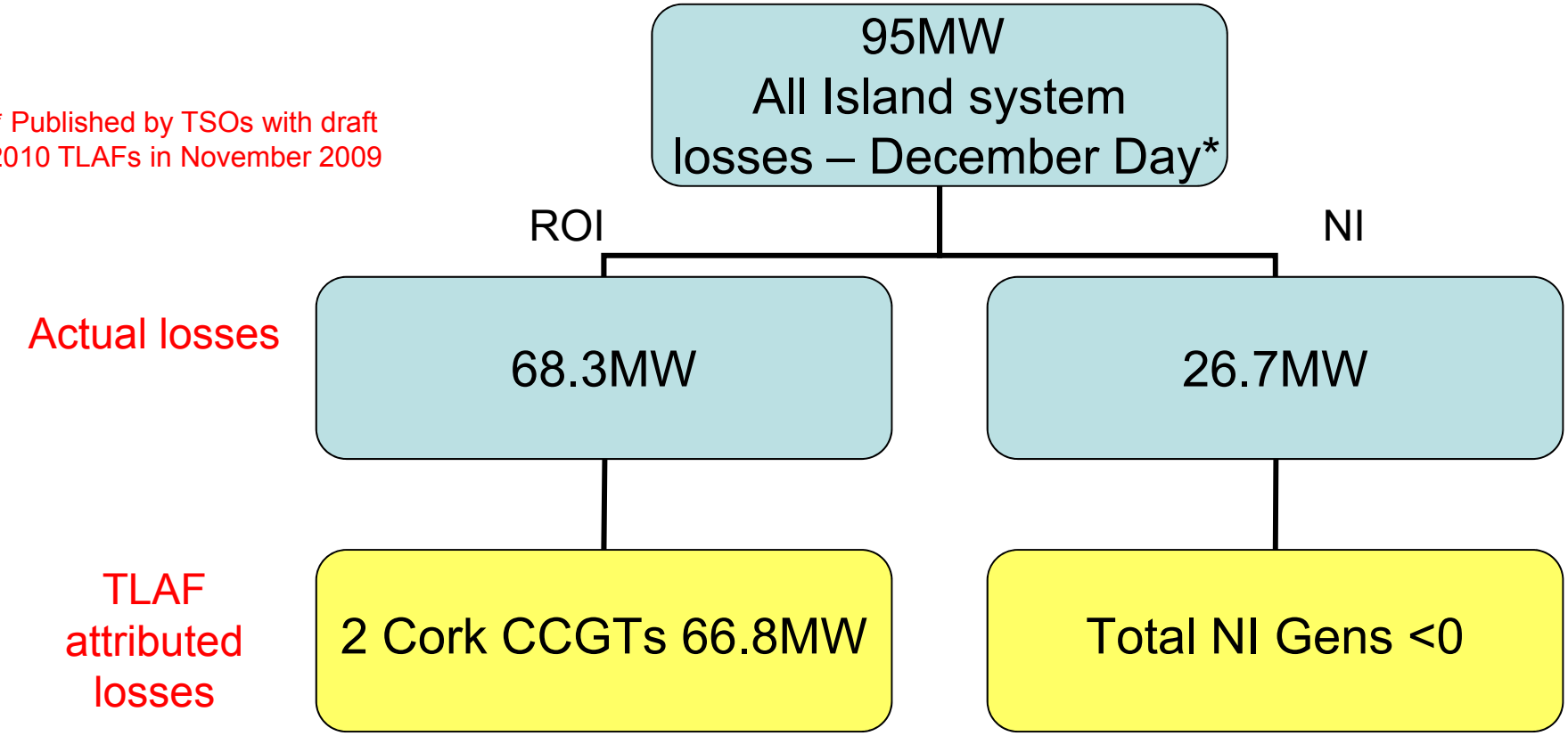
Report Findings

- Observations
  - AD2/BGE generation has minimal impact on actual system losses.
  - The first 385MW of generation from AD2/BGE actually reduce system losses.
  - The first 800MW of generation from AD2/BGE are loss free in relative terms.
  - Irrespective of output from Cork generators, minimum system losses cannot be reduced below ~50MW.

- Conclusion
  - Methodology is not reflective of actual impact on system.

Current TLAF methodology is broken!

* Published by TSOs with draft 2010 TLAFs in November 2009



Overall Conclusions

- TLAF methodology is not fit for purpose
  - Works at the margins
  - Makes absolutely no sense to apply same TLAF to all of the output
- Unjustifiable distortion of market
  - Certain plants disproportionately penalised
    - Cork CCGT plants covering all of transmission system losses in RoI
    - Significant monetary impact for Aghada CCGT
  - Certain plants disproportionately rewarded
    - Significant change to 2010 TLAFs granted benefits without justification
- Broken TLAF methodology resulting in uneconomic dispatch of plant, unnecessary CO2 emissions.

Not delivering value for Customer