



2006 Loss Factor Web Based Calculations: Proposal

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2006 Loss Factor Web Based Calculations Proposal for Stakeholders

The purpose of this presentation is to provide:

- A recap – why is the loss factor web based calculator being offered?
- Several options and scenarios
- An implementation plan for AESO, Teshmont and Stakeholders (including timeframes, budgets, team(s), technologies, recommendations)
- Conditions *
- Next actions



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Why a Web Based Calculator?

- The 2006 loss factor methodology was implemented on January 1 2006
- Loss factors are an important cost component for stakeholders.
- Prior to coming to AESO with a request on a project and subsequent costs (such as loss factors) proponents have expressed a desire to roughly calculate their own loss factor



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Why a Web Based Calculator? (2)

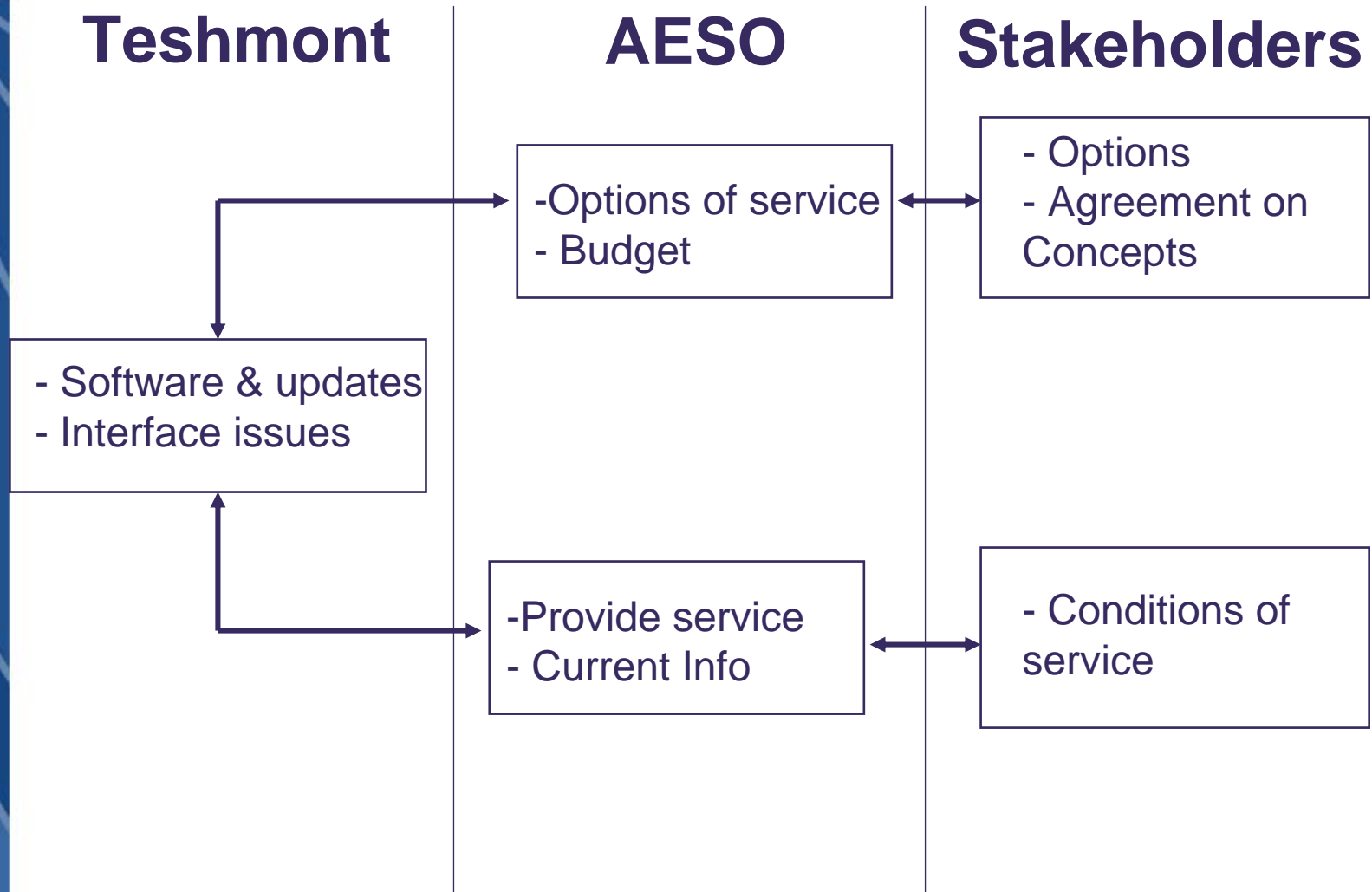
- AESO agrees with the ability to pre-calculate, and suggests the following:
 - Some projects (inter-ties, huge generators) may not be easily represented in the web based calculator at first
 - All official loss factor prelim and final calculations come from the AESO with an appropriate application
 - More conditions later in presentation
- Other ideas with more benefits (such as a confidential consultant) will be entertained if requested by stakeholders



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Flow Diagram



Options and Scenarios

- The following ideas may allow some latitude in meeting stakeholders expectations on easily accessible loss factor calculations
- Options can be enacted alone
- Scenarios are combinations of options
- Other options/scenarios may be requested by stakeholders
- Agreement and terms must be decided prior to AESO committing funds/resources



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Option 0 – Trivial Solution

- User enters AESO web site and requests the Loss Factor Calculator summary
- A summary appears with loss factors at all buses on system. Location, name or bus can be used to select a loss factor. Can be tabular or on map.
- Teshmont software used to make LF estimation ahead of time
- Estimation made on 0 MW
- Estimate returned
- Conditions apply to estimate (see 'Conditions *')



Option 0 – Trivial Solution, Analysis

- Least cost option (budget <\$100)
- Trivial solution, no customization
- Coordination of AESO/Teshmont
- August 2006 timeframe, best outcome
- Solution on line
- No cost to user



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Option 1 – Basic Solution

- User enters AESO web site and requests the Loss Factor Calculator (LFC)
- User chooses bus/location for a LF determination
- 12 current and fifth year PSSE cases are pre-loaded on site
- Teshmont software used to make LF estimation
- Estimation can be made on 0 or estimated generator amount
- Virtual Load Flow estimate returned sub-hour
- Conditions apply to estimate (see ‘Conditions *’)



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Option 1 – Basic Solution, Analysis

- Cost (budget \$100-300k?)
- Minimum customization
- Coordination of AESO/Teshmont
- August 2006 timeframe, best outcome
- Solution delivered sub hour
- No charge to user



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Option 2 – Full Solution

- User can use Option 1, or customize by...
- User can access 12 PSSE cases on the site and modify them to suit their modeling needs
- User uploads PSSE cases back to temporary area on web and calculates a LF at a new/existing bus
- Estimation can be made on 0 or estimated generator amount
- Estimate delivered sub-hour
- Conditions apply to estimate (see ‘*’)



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Option 2 – Full Solution, Analysis

- Higher cost option (budget \$400-500k?)
- More complex solution, more customization to accommodate PSSE changes, temporary calculation area, etc
- Coordination of AESO/Teshmont more involved
- End 2006 timeframe, best outcome
- No charge to user



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Option 3 – Consultant Solution

- User chooses specific year option
- Cases will be modified with best info on hand (10 year plan, local additions, etc)
- Consultant does work using confidential info
- Estimation can be made on generator amount
- Estimate returned within 1-3 weeks
- Conditions apply to estimate (see ‘*’)
- Expect human interaction and consultation
- May be inside or outside AESO



Option 3 – Custom Solution, Analysis

- Higher cost option (budget + user pays)
- Complex solution via consultant
- Coordination of AESO/Teshmont most involved
- 2007 timeframe, best outcome



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Scenario 0

- Option 0 precedes Option 1 implementation
- Easiest scenario to develop
- Leads to Scenario 2
- User gets results in best timeframe and relevant enhancements downstream



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Scenario 1

- AESO can offer Option 1 in 2006 with a commitment to Option 2 in 2007
- Scenario 1 allows for commitment to more complex solution while learning from a less complex solution
- User gets results in best timeframe and relevant enhancements downstream
- Prototype for further web endeavors



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Scenario 2

- Combination of Options 1/2/3 as per stakeholders wishes
- Allows stakeholder latitude in determining project outcomes
- Expect delays for more complex outcomes
- Technology becomes issue



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Conditions *

- User beware!
- AESO always is the formal prelim and final loss factor source. Estimates are just that
- Cases are from the next year. Any further out (3-4 years) will result in estimates being more risky
- Software to calculate LF's resides with AESO
- Teshmont software is current and relatively automatic
- Number of concurrent users may be limited
- Identification process proposed – password required. List of users confidential.



Conditions * (2)

- Stakeholders will be asked to participate in assessing the web solution and outcome
- AESO budgets money for improvements and owns the process
- Project representation may be limited in extreme cases. i.e. inter-tie additions, huge generators, etc
- Always an issue of best information in the cases when making an estimate
- Results are calculated ASAP. The majority of time to achieve results likely will be in the analysis



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Next Steps

- Confirm or refine options
- Stakeholders agree to a plan by >50%?
- Confirm budgets after getting stakeholder input
- Coordination with Teshmont on solution
- Have Teshmont visit in mid-Feb 2006 for stakeholder meeting
- Sign contract with Teshmont and confirm AESO support once stakeholders have ok'ed plan
- AESO prepared to start ASAP



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