

Stakeholder Comment Matrix – Administrative Amendments to an ISO Rule
Proposed amended Section 502.8 of the ISO rules, *SCADA Technical and Operating Requirements*
(“Section 502.8”)



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| Period of Comment: January 5, 2021 through January 22, 2021 Comments From: ENMAX Corporation Date: 2021/01/21 | Contact: Mark McGillivray Phone: Email: MMcGillivray@enmax.com |
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Instructions:

1. Please fill out the section above as indicated.
2. Please refer back to the Letter of Notice under the “Related Materials” section to view related materials.
3. Please respond to the questions below and provide your specific comments, if any. Blank boxes will be interpreted as favourable comments.

The AESO is seeking comments from Stakeholders on the proposed administrative amendments to Section 502.8 of the ISO rules, *SCADA Technical and Operating Requirements* (“Section 502.8”) with respect to the following matters:

| | Development of a Proposed ISO Rule | Stakeholder Comments |
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| 1. | Do you agree or disagree that the issues identified in the Letter of Notice require the proposed administrative amendments to Section 502.8? Please comment. | No comment at this time. |

| | Development of a Proposed ISO Rule | Stakeholder Comments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|----------------------|-------|----------|------------|-----------------------|--|--|--|---|--|---------------------|-----|--|----|--------------|----------|--------------------------|----------|---------------|---|---|--|--|--|--|----|---------|-----|---------------------|-----|-------|-------|---|------------------|------------------------|--------------------|--|----|----------------------|---------------------|--------------------------------|---------|-------|----|---------------------------|--|--|--|--|----|---------------------|----------------------|
| 2. | Do you agree or disagree with the proposed administrative amendments to Section 502.8? Please comment. | <p>Table 2</p> <p style="text-align: center;">Table 2 Accuracy and Resolution Requirements by Measurement Type</p> <table border="1" data-bbox="1184 545 2018 1073"> <thead> <tr> <th>Measurement Type</th> <th>Units</th> <th>Accuracy</th> <th>Resolution</th> </tr> </thead> <tbody> <tr> <td colspan="4">All facilities</td> </tr> <tr> <td>All analog measurements not otherwise specified below</td> <td></td> <td>+/-2% of full scale</td> <td>0.1</td> </tr> <tr> <td>Frequency (between 55 Hz and 65 Hz only)</td> <td>Hz</td> <td>+/- 0.012 Hz</td> <td>0.001 Hz</td> </tr> <tr> <td>Transformer tap position</td> <td>Position</td> <td>Integer Value</td> <td>1</td> </tr> <tr> <td colspan="4">Renewable aggregated generating facilities</td> </tr> <tr> <td>Ambient temperature (for solar facilities)</td> <td>°C</td> <td>+/-1 °C</td> <td>1°C</td> </tr> <tr> <td>Barometric pressure</td> <td>hPa</td> <td>6 hPa</td> <td>1 hPa</td> </tr> <tr> <td>Global horizontal irradiance (for solar facilities)</td> <td>W/m²</td> <td>+/-25 W/m²</td> <td>1 W/m²</td> </tr> <tr> <td>Potential real power capability</td> <td>MW</td> <td>+/-10% of full scale</td> <td>0.5% of measurement</td> </tr> <tr> <td>Wind direction from true north</td> <td>Degrees</td> <td>+/-5°</td> <td>1°</td> </tr> <tr> <td colspan="4">Regulating reserve</td> </tr> <tr> <td>Regulating reserve measurements</td> <td>MW</td> <td>0.25% of Full Scale</td> <td>0.25% of measurement</td> </tr> </tbody> </table> <p>ENMAX comments:</p> <p>“% of measurement” as used in Table 2 – Can the AESO provide a definition of the term and/or an example in the context of its use in Table 2 so that it is clear what is required from market participants?</p> <p>Table 2 Frequency, column “Resolution” 0.001 Hz” – ENMAX seeks to better understand what value 0.001 Hz provides over 0.01 Hz when the accuracy is +/- 0.012 Hz?</p> | Measurement Type | Units | Accuracy | Resolution | All facilities | | | | All analog measurements not otherwise specified below | | +/-2% of full scale | 0.1 | Frequency (between 55 Hz and 65 Hz only) | Hz | +/- 0.012 Hz | 0.001 Hz | Transformer tap position | Position | Integer Value | 1 | Renewable aggregated generating facilities | | | | Ambient temperature (for solar facilities) | °C | +/-1 °C | 1°C | Barometric pressure | hPa | 6 hPa | 1 hPa | Global horizontal irradiance (for solar facilities) | W/m ² | +/-25 W/m ² | 1 W/m ² | Potential real power capability | MW | +/-10% of full scale | 0.5% of measurement | Wind direction from true north | Degrees | +/-5° | 1° | Regulating reserve | | | | Regulating reserve measurements | MW | 0.25% of Full Scale | 0.25% of measurement |
| Measurement Type | Units | Accuracy | Resolution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All facilities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All analog measurements not otherwise specified below | | +/-2% of full scale | 0.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Frequency (between 55 Hz and 65 Hz only) | Hz | +/- 0.012 Hz | 0.001 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transformer tap position | Position | Integer Value | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renewable aggregated generating facilities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ambient temperature (for solar facilities) | °C | +/-1 °C | 1°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Barometric pressure | hPa | 6 hPa | 1 hPa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Global horizontal irradiance (for solar facilities) | W/m ² | +/-25 W/m ² | 1 W/m ² | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Potential real power capability | MW | +/-10% of full scale | 0.5% of measurement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wind direction from true north | Degrees | +/-5° | 1° | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Regulating reserve | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Regulating reserve measurements | MW | 0.25% of Full Scale | 0.25% of measurement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Development of a Proposed ISO Rule | Stakeholder Comments |
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| | <p>Applicability</p> <p>(3) Notwithstanding subsection 3(1), the legal owner of a generating unit, transmission facility, aggregated generating facility or a load facility must, notwithstanding subsection 3(1) comply with the provisions of this Section 502.8 if:</p> <ul style="list-style-type: none"> (a) it modifies its facilities after April 7, 2017 to: <ul style="list-style-type: none"> (i) increase its Rate DTS or Rate STS contract capacity; or (ii) upgrade or alter the functionality of its supervisory control and data acquisition data system; and (b) the ISO determines that such compliance is necessary for safe and reliable operation of the interconnected electric system. <p><u>ENMAX comments:</u></p> <p>If a plant proceeds to change its MC with the AESO, will 3(a)(i) in the above image apply? If so, before there is a need to comply, will the ISO need to determine that such compliance is necessary for the safe and reliable operation of the interconnected electric system? It is unclear given the location of the highlighted word “and” as it is located on the Roman numeral level of indentation in the list.</p> <p>(3) Notwithstanding subsection 3(1), the legal owner of a generating unit, transmission facility, aggregated generating facility or a load facility must, notwithstanding subsection 3(1) comply with the provisions of this Section 502.8 if:</p> <ul style="list-style-type: none"> (a) it modifies its facilities after April 7, 2017 to: <ul style="list-style-type: none"> (i) increase its Rate DTS or Rate STS contract capacity; or (ii) upgrade or alter the functionality of its supervisory control and data acquisition data system; and <p><u>ENMAX comments:</u></p> <p>There appears to be a potential typo under subsection (3)(3)(a)(ii). Should the highlighted word “data” be removed?</p> |

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| 3. | Do you agree or disagree with the proposed form of consultation and timelines? Please comment. | Agree. |
| 4. | Do you agree or disagree that no consultation group is required for this ISO rule development? Please comment. | Agree. |