Consultancy Services Agreement

Electricity Authority
and
Brian Bull

Agreement no: 18-19C040
Project Code: NP.10.050.01

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ELECTRICITY AUTHORITY
TE MANA HIKO

Schedule 1

Background

1. The Authority is preparing a cost-benefit analysis (CBA) for a proposal to change transmission pricing methodology (TPM) Guidelines.

2. This role is to check the accuracy of the content of cells and formulae in Excel spreadsheets, scrutinise source datasets, and follow through how the data is used to identify if any errors have been made. We are calling this role: "Data integrity and calculations checker".

3. Most of the CBA modelling is being prepared in R and/or Python. Excel is used to collate results and for some of the simpler modelling. Also, source datasets are generally in Excel. Where possible/useful we would expect the Consultant to replicate the Excel spreadsheets to check for errors. An Authority staff member will review the R and Python coding and the Consultant would need to liaise with our internal R/Python reviewer to check whether the collation of results in the Excel spreadsheets is correct, and to trace the use of data from source to results.

Description of Consultancy Services

4. The Consultant will provide the following Consultancy Services:

(a) Audit all CBA numerical information presented in spreadsheets for:

  (i) Integrity of use of source data

  (ii) Calculation errors

  (iii) Data input / link errors

  (iv) Sanity check on data used – highlight anything odd

(b) Review and comment on modelling or forecast methods used in spreadsheets

(c) Highlight any results in the spreadsheets that appear counter-intuitive

(d) Highlight any assumptions in the spreadsheets that appear odd

(e) Liaise with the Authority staff member who is checking the R and Python coding, to check the integrity of the data used in the modelling, and the expression of the results from the coding is correct

(f) Other checking tasks relating to TPM project modelling as required by the Authority.

5. In providing the Consultancy Services, the Consultant will conduct all quality assurance according to the following standard or measure:

(a) Replicate spreadsheets where possible to check for cell errors

(b) Document what the Consultant has checked and highlight any gaps in the checking process

(c) Document any errors/bugs/issues in a systematic way so that the Authority can track bug fixes and the Authority or the Consultant can check the fixes

(d) Identify any risks remaining.

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Reporting requirements

6. The Consultant will provide an email update to Jo Mackay (the Project Manager) on a weekly basis regarding the Consultant's progress in providing the Consultancy Services.

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