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Date: 09/07/21
Version: 1.0

Investigating the impact of applying different grid resolutions of NWP met data in atmospheric dispersion modelling: Questions from potential bidders

1. A question relating to the scope. The call document details 5 aspects that ADMLC would like addressed. It may not be feasible within the suggested budget (£55k) to undertake all 5 aspects, especially at the desired level of quality and detail. Are the Committee able to advise whether the EOI should include: (i) an estimate of timescales and costings to deliver on all 5 aspects (i.e. disregarding the £55k budget), (ii) a subset of the aspects that could be delivered close to budget or (iii) a proposed reduction in scope for each aspect that could be delivered close to budget?

   Committee's response: *This is not an uncommon issue faced by potential bidders. The Committee are seeking a high standard of workmanship, addressing as many of the tasks outlined as possible, allied with value for money; it is common for the Committee to develop an idealised task list for a relatively small budget; this is therefore a key challenge faced by the bidder and a key aspect used by the Committee to determine the best bids.*

   In summary, the Committee would expect the bidder to consider options (ii) or (iii) or some combination of these if they do not think the full work programme can be achieved with the funds available. The bidder could focus solely on Tasks 1-4 for example. Also note that of the first four tasks, Tasks 2 and 3 should be prioritised. Brief details of how the work could be extended (going forward) to address outstanding tasks and potential supplementary tasks, as identified by the bidder and on the basis of further funding (in addition to that of the order of the £55k budget), could be of value (in the EOI).

   The bidder should construct a bid that utilises their capability and expertise most efficiently, to deliver as many of the key elements of the 5 tasks outlined as possible; this may form a baseline of work, from which further extensions of the work could be undertaken and funded (by the Committee). Clearly, diverging considerably from the £55k budget is associated with greater risk to the success of the bid.

2. A question relating to Task 5 specifically. Is the intention that the probabilistic accident consequence assessment was to analyse a point-source accidental release at a single location using multi-year data, or to perform multiple simulations for varying point-source releases?

   Committee's response: *The nature of a single probabilistic assessment is to model multiple releases of a single source term over varying weather conditions described across the met dataset applied. The study should assess whether the application of different spatial & temporal resolutions of NWP met data has an impact on the typical model endpoints derived within probabilistic accident consequence assessments. The impact of the NWP met data on such endpoints may vary as a function of the release location and/or the nature of the source term. Clearly considering a large number of release locations and source terms is not feasible within this study. The challenge therefore for the bidder is to identify what combination of release locations and source terms will provide most value.*

3. A question relating to model licenses. ADMS, AERMOD and NAME-PACE are not freely available nor is the met data required to drive these models. Can it be assumed that these models and data would be provided to the contractor free of charge? Or are ADMLC expecting any costs associated with licenses and data to be included in the budget?

Committee's response: *ADMLC expect any costs associated with licenses and data to be included in the budget.*

Regarding Task 5, MACCS and PACE are example options of tools which could be applied. The current price for a PACE licence is £6200+vat (for a single user licence). A single user license comes with 10 hours of PHE support. Currently users must approach the Met Office (MO) for a NAME and met data licence; when that has been agreed with MO, PHE can supply the version of NAME integrated into PACE and also supply 5 years of MESUM5 data. Such license fees (and support / training costs) could be negated by collaborating with one or more organisations/consultancies who already have a license(s) and are proficient in the use of such models.