

QUESTIONS AND RESPONSES

November 16, 2021

RFP – Central Asia Regional Power System Modeling and Stability Study – Regional Coordinating Dispatch Center Energia

QUESTION: [Task 2] Please confirm what is implied by developing a regional dynamic model for the existing network topology? If the intention is to develop dynamic models, then these will be specific to each and every power plant and not regional as stipulated in the ToR.

ANSWER: In 2021, USEA provided Uzbekistan and Tajikistan with national dynamic models developed by international consultants. Dynamic models of the national power grids of Kazakhstan and the Kyrgyz Republic were developed earlier by different international modelers. This assignment seeks to have these available models harmonized and integrated into a single regional model.

QUESTION: [Task 2] The ToR stipulates that ‘*The Model will be constructed to represent.....*’, we presume there is a distinction here between the dynamic model and the power factory model? We infer it is the latter, please confirm?

ANSWER: Please see our answer to the question above.

QUESTION: [Task 2] Further to point 2, the models to be constructed are for a peak and off peak case which need to be aligned between three (3) different scenarios. So in total 6 effective snapshots, could you please confirm if this is all to be done for 1 single time horizon year? If so, which year is this?

ANSWER: A regional dynamic model, including the 6 snapshots mentioned above, is to be developed for the current topology (most likely 2020 or 2021), depending on the latest data available for each of the 4 networks included (Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan).

QUESTION: [Task 2] Please confirm what type of output is foreseen by performing a ‘Reliability Study’, is the intention to be able to understand the levels of compliance to relevant planning and security criteria, please confirm?

ANSWER: The objective of this study is to determine whether the recently integrated renewable generation is likely to cause network instability, and if it is, to develop possible solutions to prevent or mitigate any expected instability issues. The study is not intended to examine compliance with planning criteria.

QUESTION: [Proposal submission]. Please, confirm that Technical and Financial proposals should be submitted as ONE pdf document?

ANSWER: We would prefer the **entire** proposal be submitted as a **single** PDF document. However, separate PDF files for the technical and financial proposals are also acceptable.

QUESTION: What is the status of the available PowerFactory models country wise?

ANSWER: National dynamic models and planning models – static and dynamic – of the Uzbekistan and Tajikistan’s networks were developed in 2021; the Kyrgyz Republic dynamic model was developed in 2020. There is also a dynamic model of the national power grid of Kazakhstan.

QUESTION: Are steady-state and dynamic models available for each country? If not, for which countries the models are available?

ANSWER: Please see our response above.

QUESTION: Are the models merged together in a single model?

ANSWER: No. All models are individual by country. CDC Energia has a single regional model, but it is very outdated and would not be reliable for the purpose of this study.

QUESTION: All the necessary data for the completion of the models will be provided by USEA/CDC only?

ANSWER: USEA and CDC Energia will provide all the required data. The consultant will **not** be required to reach out to separate regional utilities.

QUESTION: Task 2: In the task, reference is made to load flow and N-1 security analysis, which are steady-states analyses. However, at the end of the sentence, stability and reliability study are mentioned. Please clarify if stability analysis shall include also dynamic assessments and if reliability analysis refers to the deterministic reliability analysis (N-1 security analysis) or to the probabilistic reliability analysis.

ANSWER: This assignment seeks to focus on transient stability (dynamic analyses) to determine potential network instability. The reliability analysis refers to the deterministic reliability.