

Consultancy/Research Proposal

Distributed Generation (<5MW) RoCoF Settings

Introduction

The system inertia and therefore the potential rate of change of frequency after loss of an infeed or demand is likely to change given developments in the electricity supply system in Great Britain.

The Grid Code Review Panel (GCRP) and the Distribution Code Review Panel (DCRP) has been working on proposals for an appropriate Rate of Change of Frequency (RoCoF) setting for protection against Loss of Mains¹.

The Panels have established a joint working group which seeks proposals from organisations to investigate the characteristics and capabilities of generating facilities within Great Britain at sites with a registered capacity of less than 5MW. Experience is required in assessing the risks of changing the protection and control arrangements for small and micro-generation where it is deployed in large scales across electricity networks. The working group seeks an independent assessment of the impact of a change to the settings of any Rate of Change of Frequency (RoCoF) based protection.

Scope of Work

The research project must provide a technical report (the technical report will be published on National Grid's website and available to all parties) including:

1. Evaluation of the risk to distribution networks, user equipment and all personnel of change of RoCoF based protection from the current settings to a range of settings up to 1Hzs^{-1} with a measurement period of 500ms;
2. Evaluation of the risk to distribution networks, user equipment and all personnel of abandoning the use of loss of mains protection (eg RoCoF or vector shift) but retaining under and over voltage and frequency protection;and
3. Evaluate the risk of adopting plant type specific guidance.

Items 1-2 are the high level objectives of the technical report.

Organisations interested in this research project are therefore requested to provide a "formal proposal" including the milestones, and cost associated with each item. The expected completion date for the project is end of December 2013.