Research report

Extremely low frequency fields: An investigation into the potential effects of EU directive 2013/35/EU on the energy sector

energy institute

RESEARCH REPORT:
EXTREMELY LOW FREQUENCY FIELDS: AN INVESTIGATION INTO THE POTENTIAL EFFECTS OF EU DIRECTIVE 2013/35/EU ON THE ENERGY SECTOR

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FOREWORD

In September 2012 the Energy Institute (EI) commissioned Aberdeen Radiation Protection Services (ARPS) to conduct a research study on the potential impact of Directive 2013/35/EU (the Occupational EMF Directive) on the operations of the energy industry.

This proactive approach aimed to identify problem areas before the Directive's recommendations are drafted into national UK legislation.

In the meanwhile the Control of Electromagnetic Fields at Work (CEMFAW) Regulations 2016 have been published and came into force in July 2016. Also a guidance document was developed by the Health and Safety Executive (HSE) explaining the employer's duties under the CEMFAW Regulations 2016 and this is published as HSG281 on the HSE website.

This present research study includes a field survey assessing the extremely low frequency (ELF) field strengths present throughout various types of energy-related sites. A comparison with the relevant reference and action levels from the Directive 2013/35/EU was drawn to allow the assessment of any potential problem areas in the energy sector.

In its conclusions the research study provides recommendations for future work in this area.

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1 INTRODUCTION

In June 2013 the European Parliament issued the EU physical agents Directive 2013/35/EU which aims to introduce reference levels for exposure to electromagnetic fields (EMFs). The particular aim of this study was to identify any areas within the energy sector which may produce low frequency and extremely low frequency (ELF) EMFs that exceed the limits stipulated by the Directive. ELFs are defined differently across the literature and so a frequency range pertaining to ELFs of 0 Hz – 500 Hz is assumed.