

Electromagnetic Frequency Information

What are electromagnetic fields?

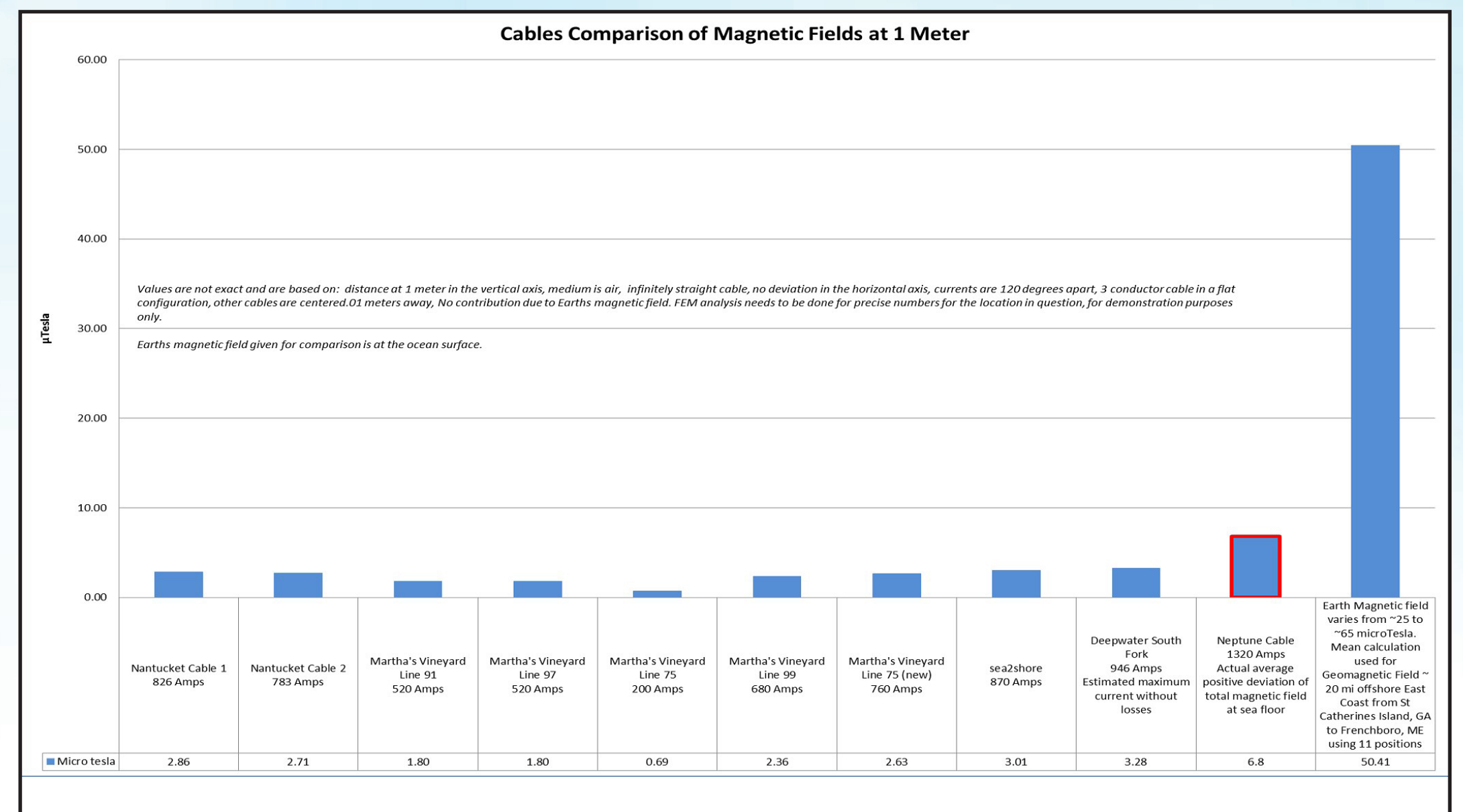
- Electromagnetic fields (EMF) are physical fields produced by electrically charged objects.
- The operation of WTG does not generate EMF; however, once the inter-array cable becomes energized, the cable will produce a magnetic field both perpendicularly and in a lateral direction around the cable.

EMF and SFWF

- The inter-array cable will be shielded and buried beneath the seafloor.
- The EMF surrounding cables such as the SFWF inter-array and the SFEC, will oscillate with a frequency of 60 Hertz (Hz).
- The electric field created by the voltage applied to the conductors within the cable is totally shielded from the marine environment by grounded metallic sheaths and steel armoring around the cable.
- The oscillating nature of the 60-Hz magnetic field will induce a weak electric field around the cable that, similar to the magnetic field, will vary in strength based on the flow of electricity along the cable.

Recent study results

- Tests on lobster and skates indicate that they can sense the field from a cable, but would not be prevented from moving over it
- Marine life grows on live cables
- Fish migration (e.g., salmon and sturgeon) is not hindered by the presence of a cable



Shielding & Exposure

- Shielded electrical transmission cables do not directly emit electrical fields into surrounding areas, but are surrounded by magnetic fields that can cause induced electrical fields in moving water.
- Exposure to EMF could be short or long term, depending on the mobility of the species.
- Mobile species are likely to pass through the area, and be exposed for a short duration.
- Sessile species, which are unable to move, will be exposed for the entire duration that the interarray cable is energized.

