

The role of Geohazards Assessment in the evolving energy mix.

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ABSTRACT

Today's world is working its way through an energy transition that continues to evolve.

According to McKinsey's 2022 global energy perspective, global investment in the energy sector is expected to increase by nearly 50% until 2050. Investments in oil and gas are expected to remain relatively stable.

The share of renewables in global power is projected to double in the next 15 years with greater growth expected to come from solar and wind.

Until now, Geohazards Assessment for the energy industry has largely focused on predicting, avoiding, and mitigating geohazards that impact oil and gas drilling or infrastructure placement.

This application is evolving in the face of growing investment in and projected increase of market share for renewable energy sources like wind and geothermal and decarbonising options like carbon capture and storage (CCS).

For the Geohazards assessment professional, staying relevant means adapting current workflows and innovating technologies that solve challenges associated with developing RES and CCS. Key contributions will continue to be centered around:

- Understanding the shallow overburden.
- Driving integration and collaboration amongst surface, subsurface and engineering disciplines
- Optimizing project cost and schedule.
- Creating geologically representative and predictive ground models.
- Facilitating the evolution of the regulatory landscape.

Current Geohazards Assessment tools and interpretation skillset are particularly well positioned to support RES and CCS development.

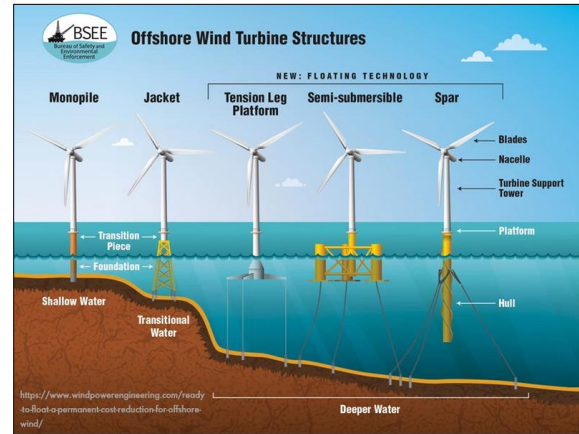


Figure 1 Offshore wind turbine structures from (<https://www.windpowerengineering.com/ready-to-float-a-permanent-cost-reduction-for-offshore-wind/>)

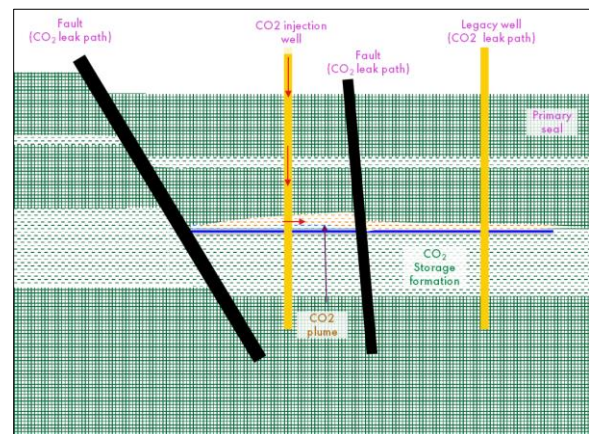


Figure 1 A simplified view of the CO2 storage environment

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