

Alternative sustainable futures for O&G companies

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Before the COVID pandemic, oil and gas companies invested only a small fraction of their capital on sustainable energy technologies. With the substantial improvement in the performance of batteries and their rapid cost reduction, the oil and gas industry could potentially lose a large share of their market in the transport sector. A similar shift in energy sources is happening with the surge in renewable energy sources to supply electricity, heating and cooling. In an ever more sustainable future, the need for an oil and gas industry could reduce significantly. This paper reviews the possible paths that an oil and gas company could follow to become a sustainable development corporation and continue to be relevant in the future. This paper aims to describe alternative sustainable pathways such as the extraction of natural hydrogen, a hydrogen economy, offshore wind power, deep sea mining, biorefineries, seawater air-conditioning, geothermal and geoengineering. This paper also proposes the use of electrolysis ships for the flexible production of green hydrogen and showed that its investment cost can be three times smaller than in fixed electrolysis plants. The oil and gas industry has substantial intellectual, financial capital and geopolitical influence that would not be lost during a shift to a more sustainable world. Indeed, these assets should be used to facilitate the transition to a more sustainable future.