

AMMONIA AND HYDROGEN CHARLEY RATTAN

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Immersed as I am in the world of hydrogen and offshore wind, I've been struck by how quickly both sectors have grown. One of the technologies or enablers, which may help take them both to the next level may lie rather bizarrely in the form of ammonia.

INTRODUCTION

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AIM:

Ammonia is an important element of the nitrogen fertiliser industry and can be used as a storage mechanism. Some are saying that ammonia may be a missing link in making decarbonisation happen. In the last couple of years, I've been involved with a number of projects involving ammonia ranging from advising supply chain entrants to integrated major renewable energy proposals. In the short run ammonia may be well suited for decarbonising sometimes remote islands particularly where its use as a liquid carrier for hydrogen can be integrated into a wind farm scheme. Paradoxically ammonia is a better carrier of hydrogen than hydrogen itself as its properties make transportation and storage straightforward. In some ways it makes more sense to transport hydrogen as ammonia, and then back to hydrogen.

MATERIALS AND METHODS:

green-ammonia-plant-proposed-for-orkney

RESULTS:

Ammonia is already well known in the agriculture and chemical industries and can aid their route to net zero by 2050. Both sectors are seeking to couple to Europe's future renewables aspirations

CONCLUSIONS:

Paradoxically ammonia is a better carrier of hydrogen than hydrogen itself as its properties make transportation and storage straightforward. In some ways it makes more sense to transport hydrogen as ammonia, and then back to hydrogen.

KEYWORDS:

Oil and gas, hydrogen, ammonia, offshore wind.

BIOGRAPHY:

UK based offshore wind & hydrogen business advisor and trainer. Delivering global offshore wind business advice, problem solving and training: www.charleyrattan.com Charley Rattan - offshore wind business advisor and trainer with many years' senior level experience within the industry. Currently advising and mentoring companies engaging with the global energy transition with a focus on offshore wind, floating offshore wind and hydrogen. Passionate about renewable energy, working for Shell, Eon and SSE consenting hundreds of MW of wind energy assets. With a reputation for effective communication and managing complex, sometimes controversial projects that are delivered on time, safely and within budget. A commentator and keynote speaker on energy, Charley is a regular broadcaster for Roch Valley Radio.