

#h2nw

# NOVYN HYDROGEN PROJECTS

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DELIVERING THE  
**HYDROGEN**  
ECONOMY

North West

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# INOVYN Hydrogen Projects

Dr Frank Rourke

# Safety is the number 1 priority at INOVYN

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**Sustainability** and **innovation** are at the heart of INOVYN's success and strategy

The hydrogen economy is an ideal fit ...

# Long history of hydrogen production at Runcorn Site





# Hydrogen production

At INOVYN's Runcorn Site we already produce enough hydrogen for about:-



1000 buses



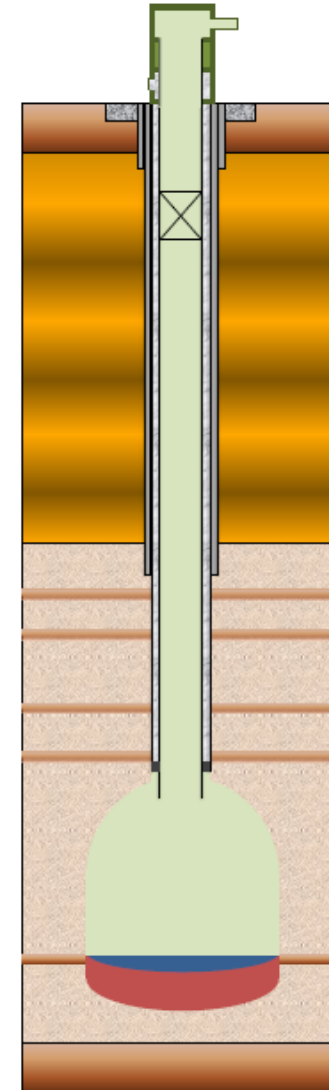
or 10,000 taxis



or 100 trains

# HySecure Project - salt cavity hydrogen storage

- As with any fuel you must have a storage solution to balance supply with demand
- INOVYN with partners Storengy UK and Element Energy are studying the feasibility of creating a purpose built salt cavity for the storage of pure hydrogen gas
- With further support we could go on to develop a bespoke cavity for the storage of a significant quantity of hydrogen as a back up supply to any of the North West hydrogen projects



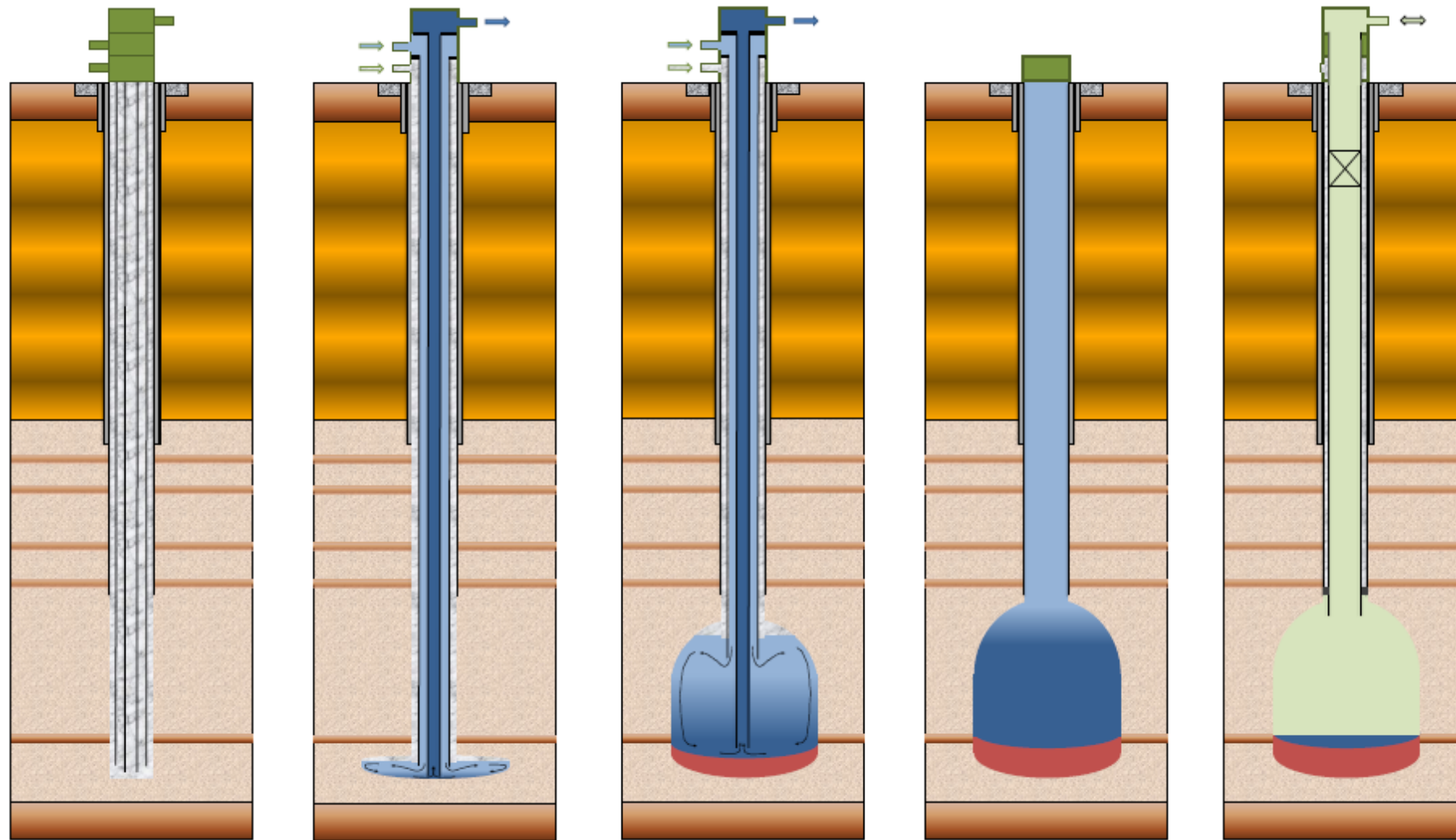


# HySecure Project - Stublach Site on the Holford Brinefield



- The Holford Brinefield in mid Cheshire is already home to the UK's largest onshore natural gas storage facility
- Building on the existing solution mining infrastructure and the key skills of the partners, HySecure could be developed in a cost competitive manner to prove the concept of salt cavity hydrogen storage
- Providing a real benefit to the North West economy and helping secure a low C future

# HySecure Project - the solution mining process

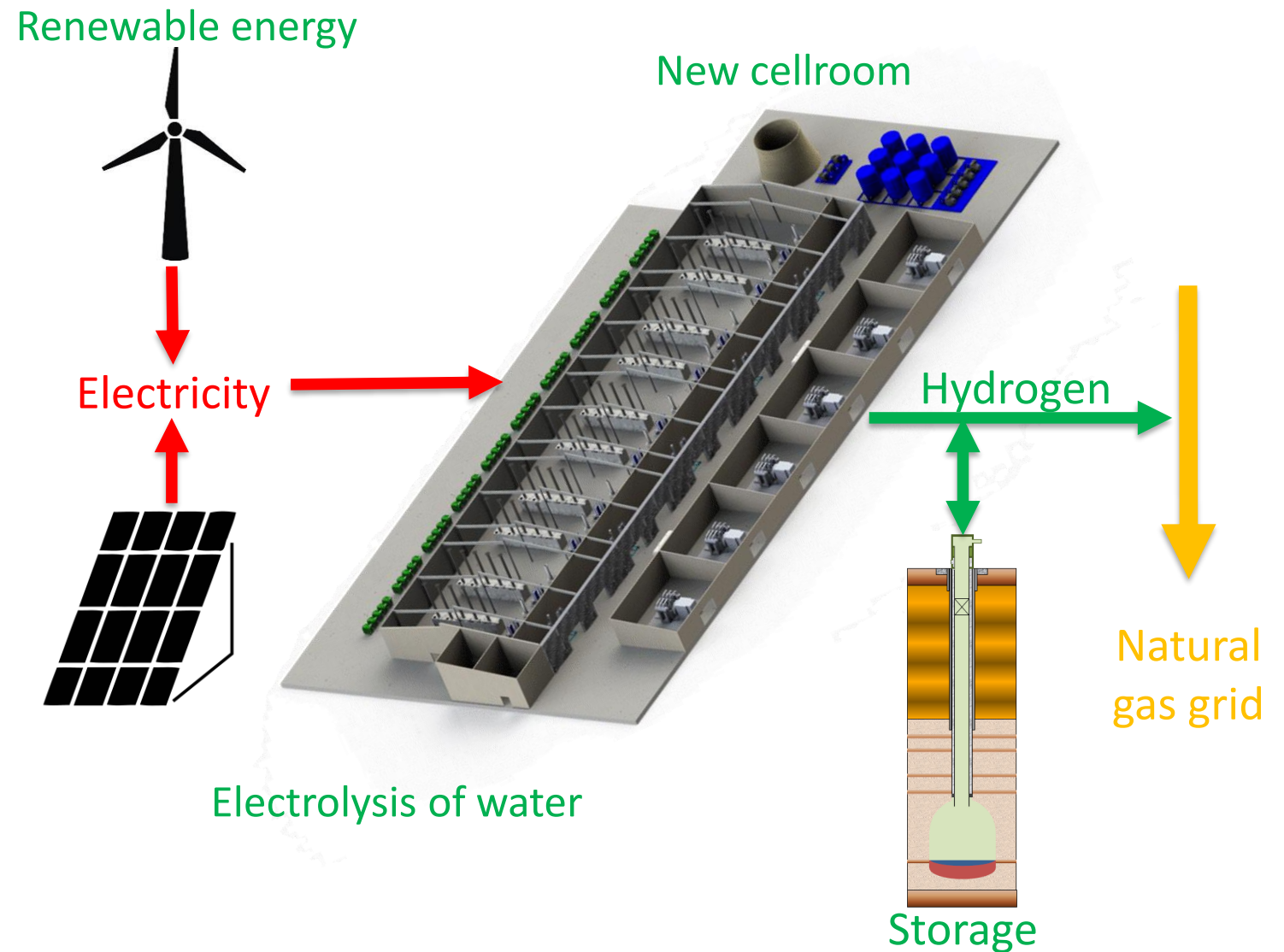


- Salt is impervious to gas
- The UK and Europe have a long history of safe operation of salt cavities for natural gas storage
- The technology will now be proven for hydrogen gas storage

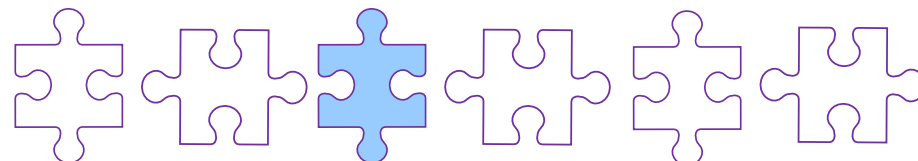
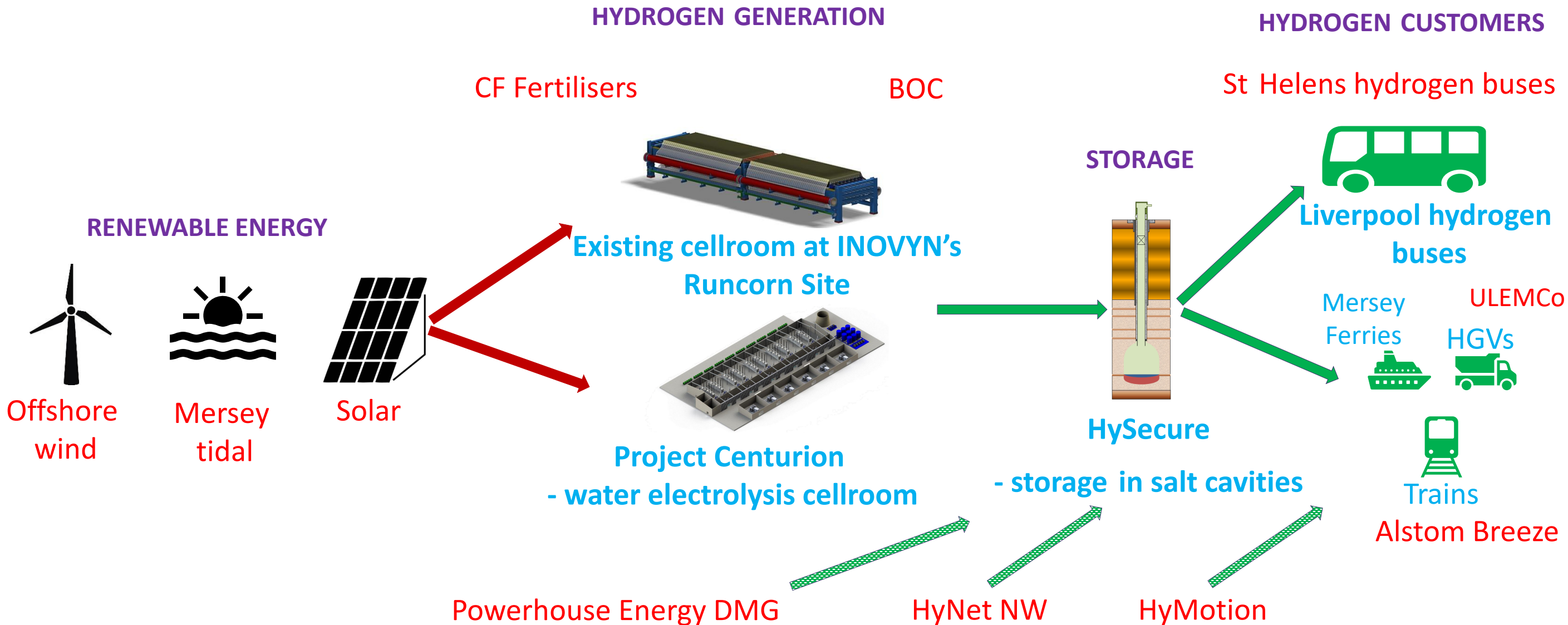
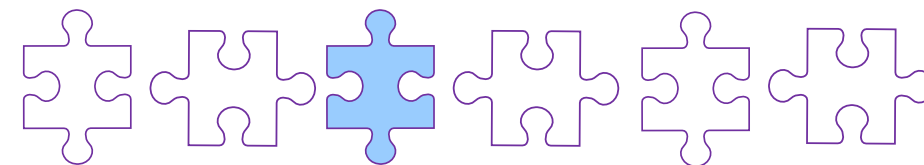


# Centurion Project – ‘Power to Gas’

- ‘Power to Gas’ is a way of capturing surplus electricity, transforming it to hydrogen and storing or using the energy in the gas grid
- Project Centurion is a feasibility study for a potential 100MW water electrolysis cellroom at INOVYN’s Runcorn Site. Equivalent to 40tes/day H<sub>2</sub> or another 2000 buses



# Hydrogen projects - joined up thinking



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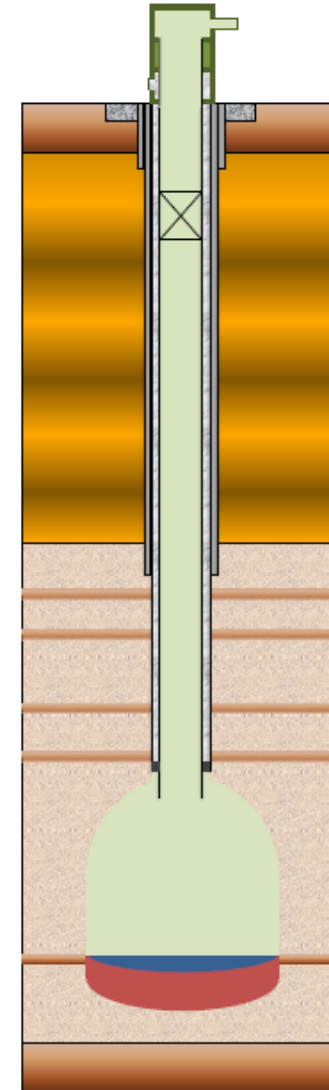


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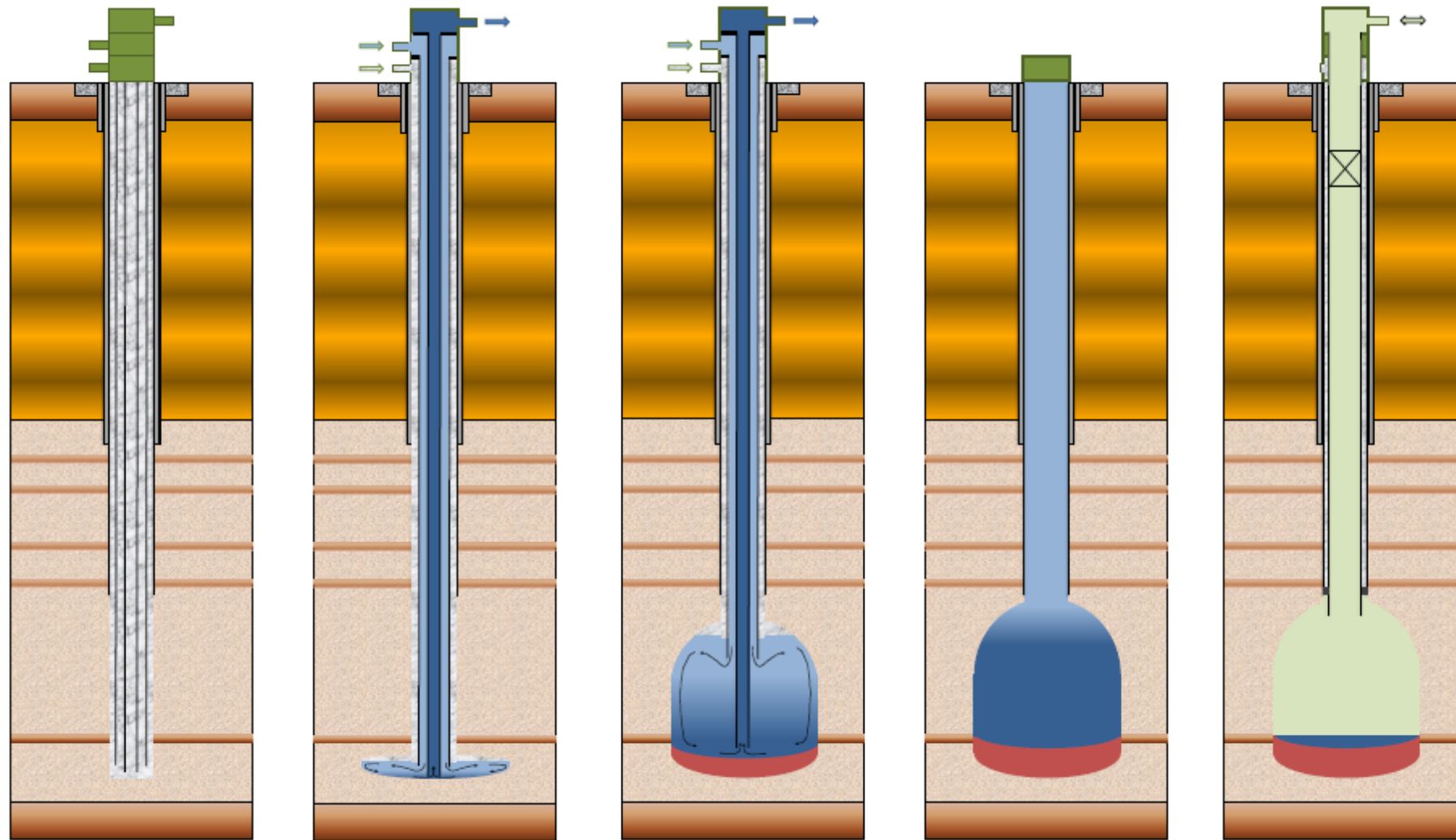


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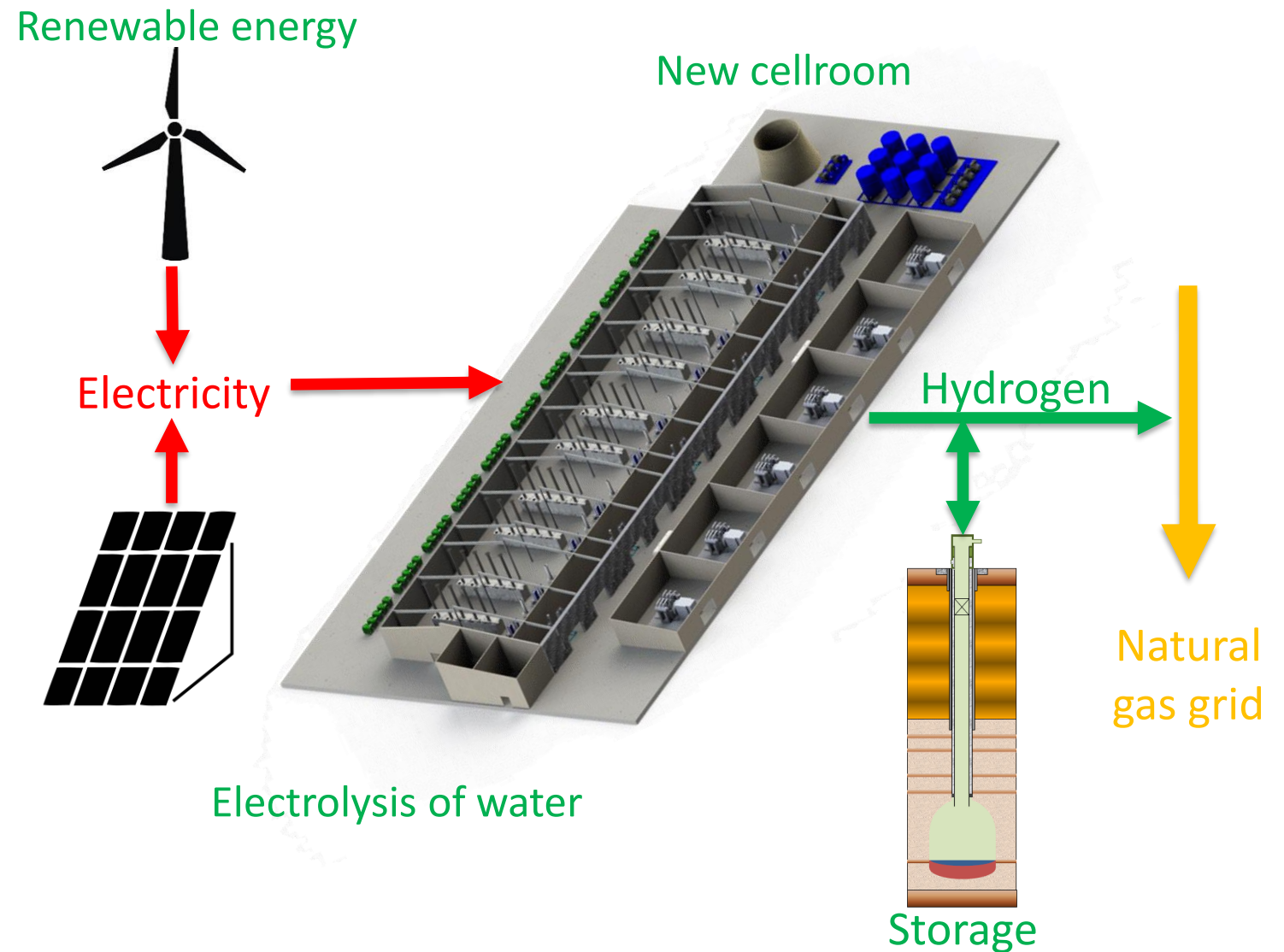


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