

An aerial photograph of a large industrial facility, possibly a refinery or chemical plant, with several large storage tanks and processing units. In the background, a line of wind turbines stretches across a green field under a hazy sky. A white, hand-drawn style line graphic frames the central text, starting from the bottom left, curving up to form a peak, and then curving down to the bottom right.

# DEEP DIVE

**Inefficiencies in the green transition:  
Balancing incentives, finance, and risk**

**By GreenLab CFO, Annette Vestergaard Christensen**

# MOST PROJECTS HAVE STILL NOT REACHED FID

## 2023 HEADLINES

### European hydrogen projects may face delays

UK's HyNet project is awaiting arrangements for hydrogen pipelines and storage

European green hydrogen projects are being delayed due to torturously slow EU subsidy processes, say developers

Delays FID at US

### Hydrogen Project

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Spain sees delays to thousands of MW of hydrogen projects

Development of Longford hydrogen facility delayed by UK's Powerhouse

### Denmark Delays Man-Made Energy Island in North Sea Due to High Costs

- Government says project is not profitable and too risky
- More options for 'better and cheaper concept' will be analyzed

RENEWABLES

pulls plug on UK hydrogen venture

The UK Gigastack project is put on hold and with it the plan to establish 100MW electrolysis plants by 2025. More maturation is dge.

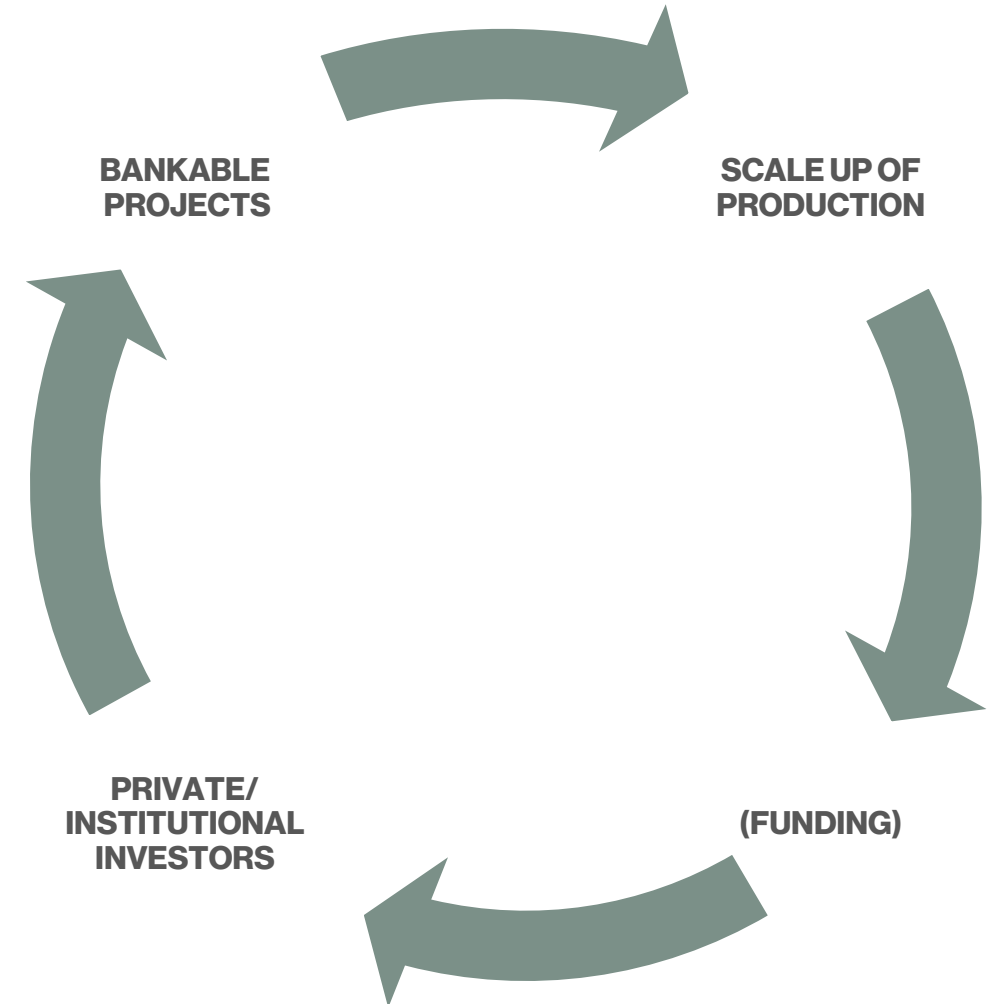
Global hydrogen project announcements fall as policy delays, supply chains bite

set to delay FIDs on green hydrogen projects as promised funding from Spanish government fails to materialise

# ENSURING THE AVAILABILITY OF FUNDS

## “THE FINANCING PARADOX”

- »» To achieve competitive low-emission products (and thus profitable products), scaling of production is required.
- »» Scaling production requires increased investments.
- »» Public subsidies requires “own investment”
- »» Co-financing must be secured from private/institutional investors
- »» Investors requires bankable products/profitable projects.





# WHAT "GREEN TECH" PROJECTS TYPICALLY HAVE TO OFFER TO THE INVESTOR

## GREEN TECHNOLOGY PROJECT FEATURES:

- »»» High partnership- and external stakeholder complexity
- »»» High technology/maturity risk
- »»» Uncertain offtake
- »»» Low cost forecast accuracy and high commodity risk
- »»» Uncertain framework conditions

= "Non-bankability" features

= Requirement for substantial risk premium, which typically cannot be met by the projects

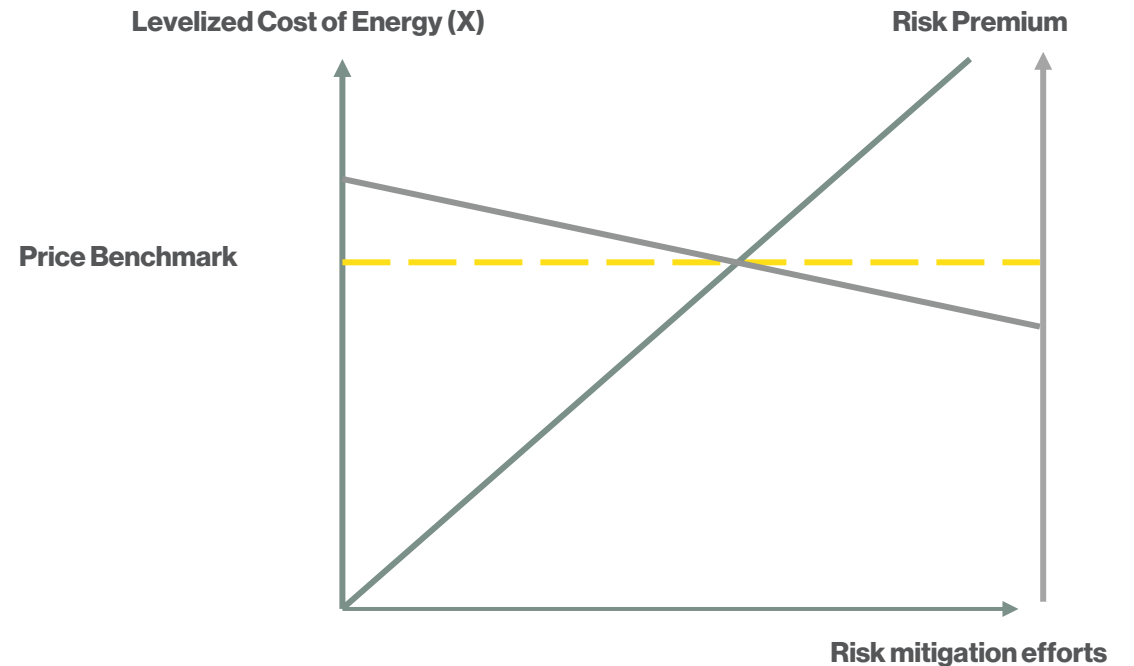


**The gap between the risk profile of the projects and the lack of risk appetite across the sector slows down the green transition**

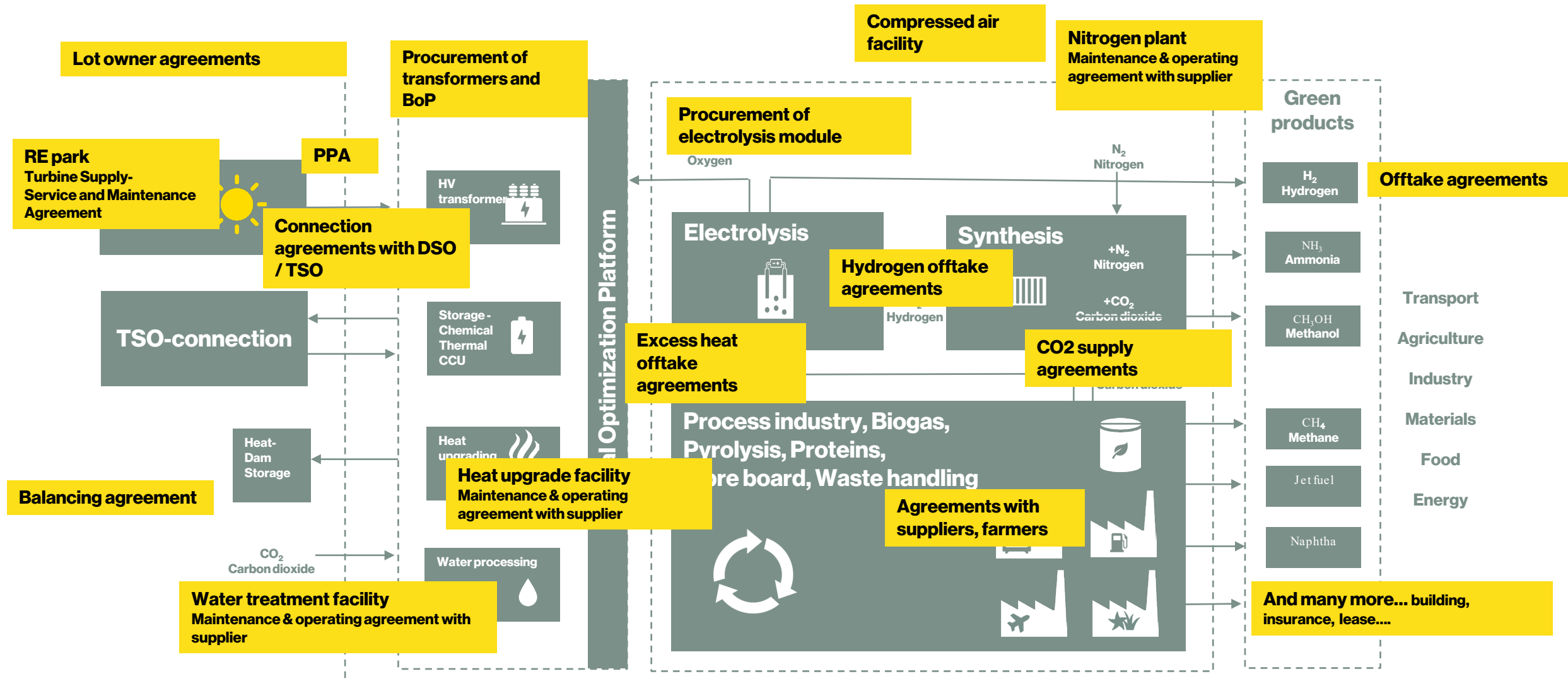
# A STANDARD APPROACH TO MANAGING “**UNCERTAINTY**” AND MAKE THE PROJECTS MORE ATTRACTIVE.

Contract management strategies:

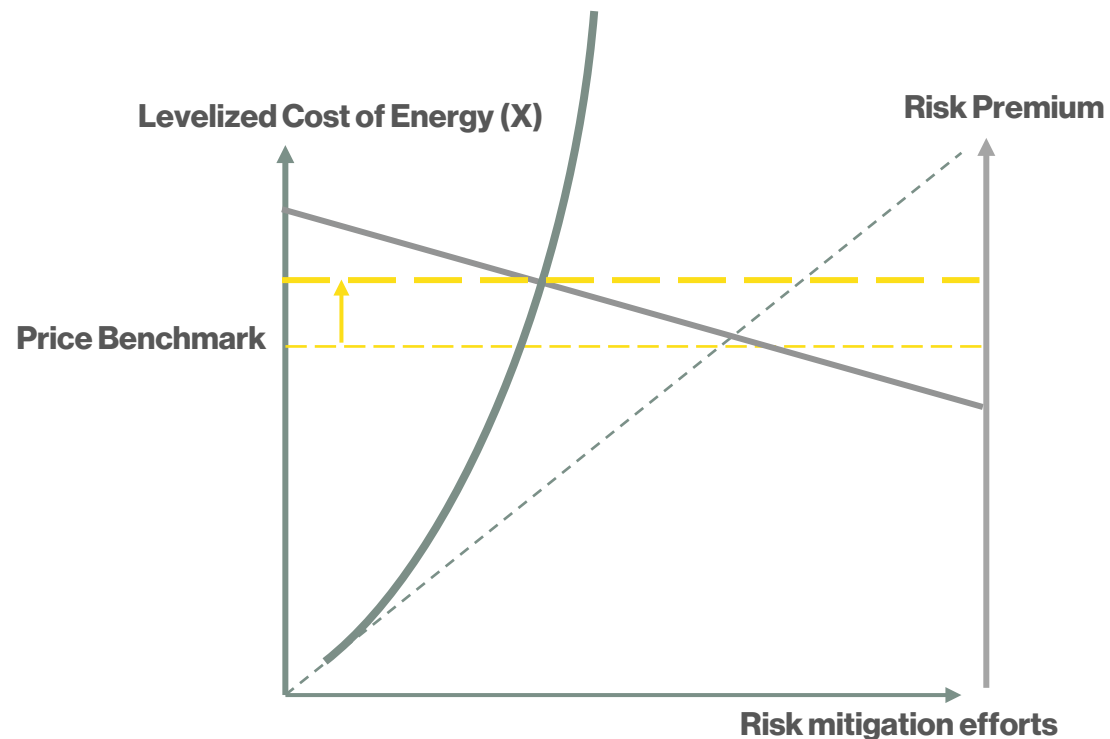
- ››› Liquidated damages provisions
- ››› Gurantees requirement
- ››› ”In-source” part of valuechain
- ››› Invest in redundant capacity or oversize the asset investment
- ››› Using financial strategies to offset risk of any adverse price movements



# VALUE CHAIN COMPLEXITY AND INTERDEPENDENCIES INCREASES THE NUMBER OF CONTRACTS REQUIRED

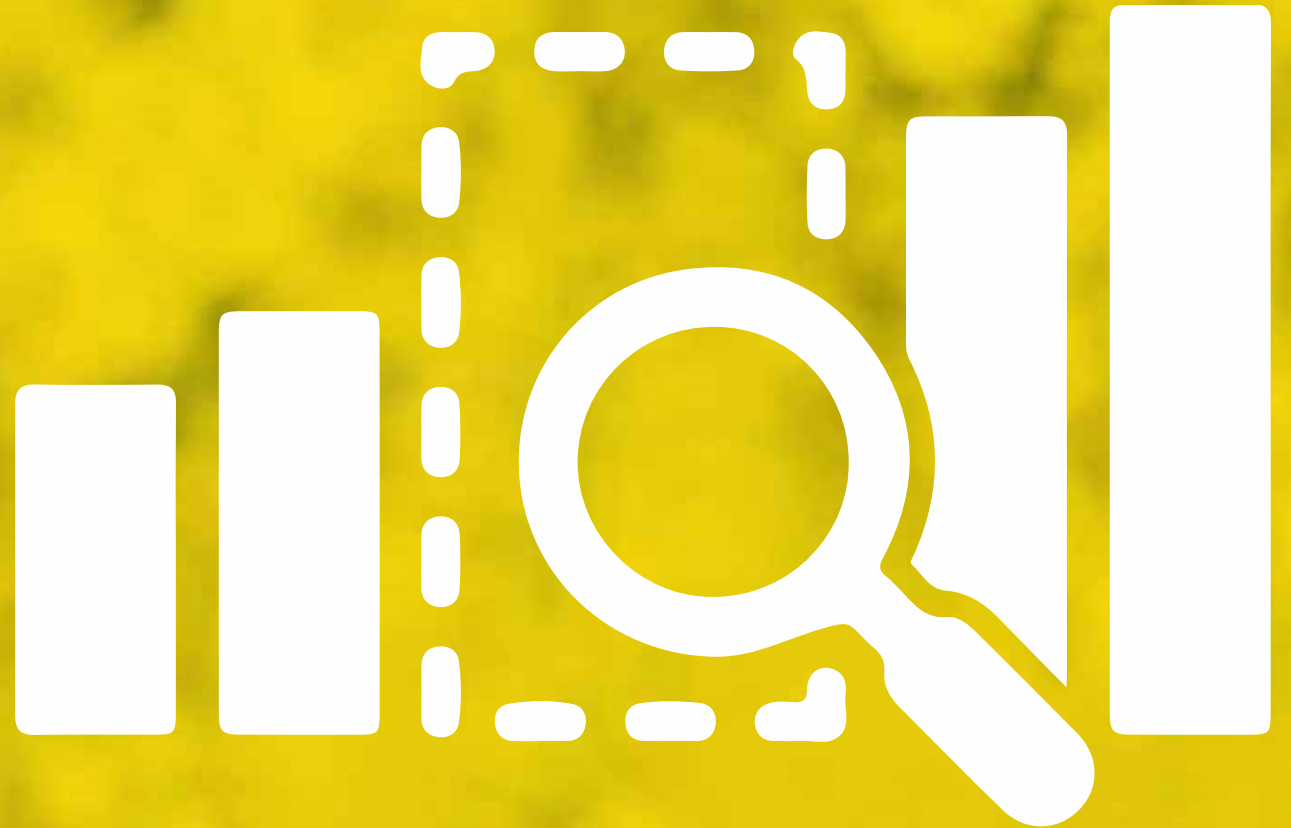


# IN A MULTI-CONTRACT CONTEXT, THE COST OF RISK MITIGATION EFFORTS INCREASES EXPONENTIALLY





**HOW  
DO WE  
CLOSE  
THE GAP?**



**WHAT IF THE  
PROBLEM IS **NOT**  
THE PROJECT?**

**BUT THE WAY WE  
**EVALUATE** THESE  
PROJECTS?**

**GreenLab**



**GAS  
SECTOR**



**FUELS  
SECTOR**



**HEAT  
SECTOR**



**ELECTRICITY  
SECTOR**



**BIOMASS  
SECTOR**







**OR THAT WE CONTINUE  
TO USE  
THE WRONG  
BENCHMARKS?**





# HOW TO NARROW THE GAP?

## »» Industrial cluster benefits:

- Reduces costs and increases the probability of reaching “parity” at lower scale production, by co-locating and creating simultaneity between production (supply) and consumption (demand).
- Reduces time-to-market for participants as GreenLab invests in infrastructure capacity ahead of need

## »» which are supported by:

- "Facilitation" of a co-operative model which engages and enables sharing of risk and upside
- An in-between aggregator which can decouple the chicken from the egg
- The willingness to “lean in”

## »» and may:

- Encapsulate some of the risk investors are facing



“

# Placing projects in the right context....

- »»» may increase the likelihood of project survival
- »»» which may increase bankability
- »»» which increases the availability of funds for scalability