

SMARTENERGY

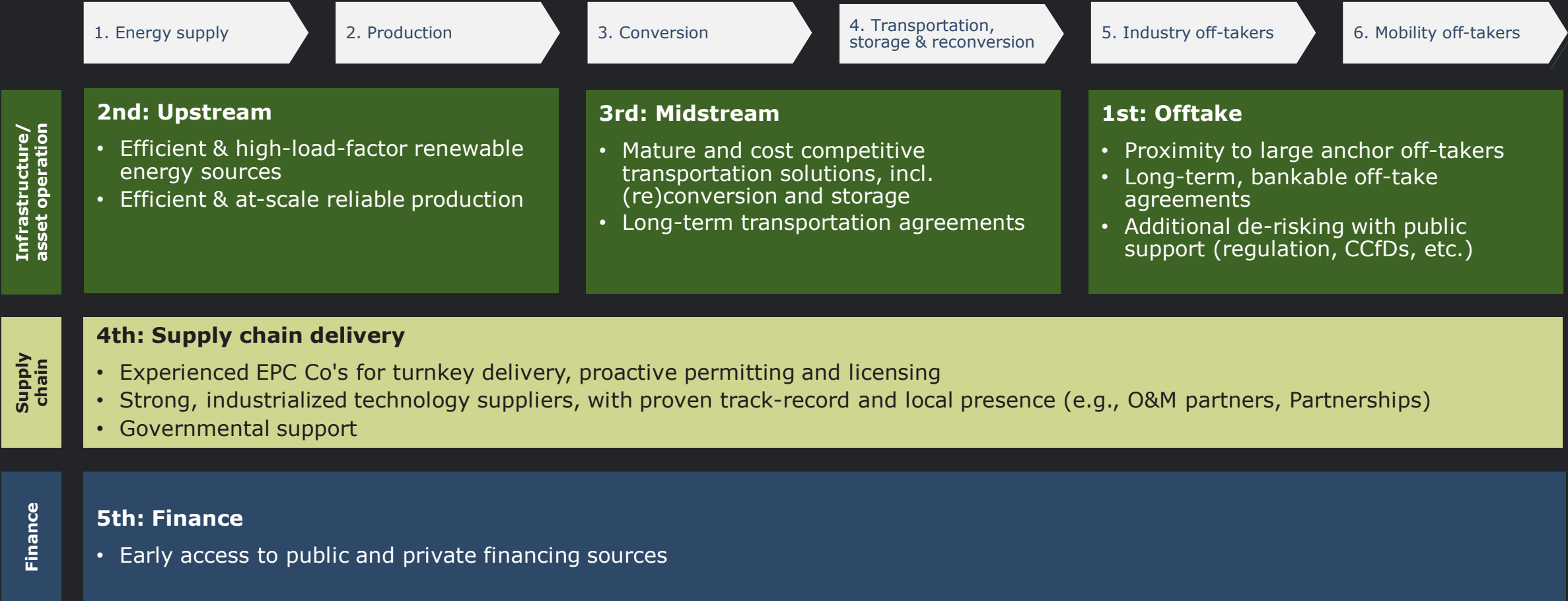
# Financing the hydrogen ecosystem: The developers perspective

**Christian Pho Duc**

Hydrogen Europe Flagship Event, 25<sup>th</sup> October 2022

# Green hydrogen projects show clear progress along the value chain increasing the maturity for investors

## Key success factors for green hydrogen projects



# Key challenges and opportunities towards FID

## Challenges

### Regulatory uncertainty

- Additionality
- Low-carbon H2 definition

### Public funding uncertainties

- Further acceleration needed
- Market making mechanism required – expectations to EU H2 Bank

### Energy crisis and RES

- High electricity prices make securing PPAs more difficult
- Ramp of RES too slow

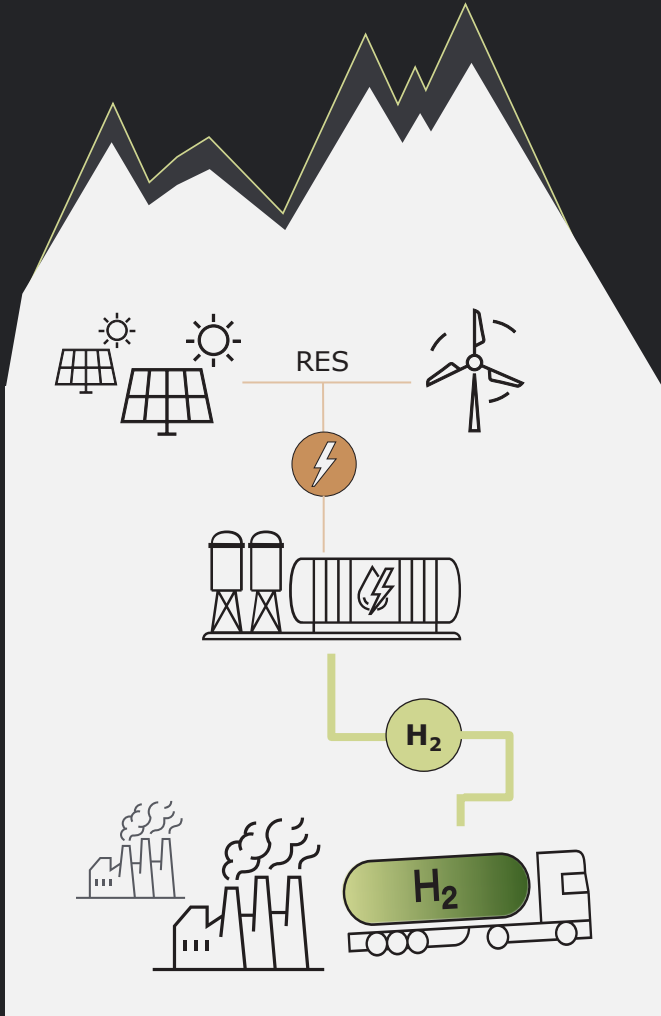
## Opportunities

### Off-take industries now on board

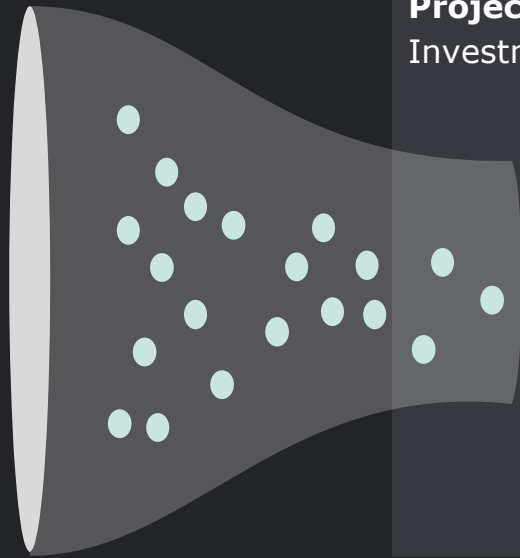
- Applications using grey H2 looking for fast replacement
- Large demand expected by new applications
- Demand side support required

### On-site RE+H2 approach


- De-centralized valley approach
- Overcoming electricity price challenge
- Hybridisation
- New sites suitable (off-grid)







# Financial structure to support flexible investment profiles








## Project SPVs grouped into H2 asset portfolio

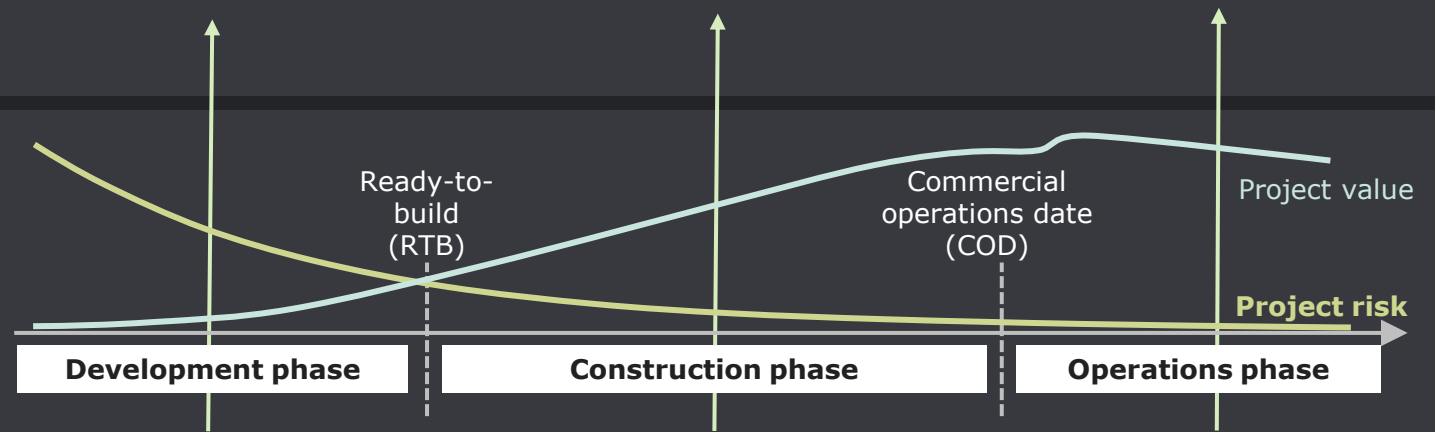
Investments into single SPVs or in a portfolio investment vehicle 

 Size/capacity per project	10-150 MW	5-100 MW	20-200 MW	...
 Products	RH2	RH2/eAmmonia	RH2/eFuels	...
 Geographies	Spain	Portugal	Italy	...
 Off-takers	Industry	Mobility	Energy	...

## Benefits of the vehicle to investors

-  **Diversification of investment and broad exposure to investment opportunities**
-  **Superior risk balancing/containment**
-  **Ticket size flexibility**
-  **High liquidity of investment**
-  **One-stop-shop investment experience, from project origination, via EPC & asset mgmt. to offtake contracting**

**Project pipeline:**  
**> 1 GW**  
 14 projects  
 across key European  
 markets



- Institutional investors taking equity stakes in investment portfolio
- Entry and exit timing at different maturity levels, depending on risk-return preferences

# Thank you!

Christian Pho Duc

CTO

[c.phoduc@smartenergy.net](mailto:c.phoduc@smartenergy.net)

SMARTENERGY Group AG  
Sihleggstrasse 17  
8832 Wollerau SZ  
Switzerland

[info@smartenergy.net](mailto:info@smartenergy.net)