THE CHALLENGE

5-10% 5 to 10% of announced clean hydrogen projects worldwide have reached final investment decision (FID).

Large-scale clean hydrogen projects are perceived as high-risk investments.

USD 100 Billion per year 2030

The median investment per large-scale project is between USD 500 million and USD 1 billion.

The median ticket size of each investor amounts to USD 100-500 million.

Main risk factors affecting the deployment of large-scale hydrogen projects:

- Uncertainty on the offtake
- Political & regulatory
- Macroeconomic
- Technology
- Lack of enabling infrastructure

PROPOSED SOLUTIONS:

DE-RISKING

De-risking instruments can enhance project bankability and help projects reach FID by:

- Lowering the financing cost and the total project cost.
- Mitigating key uncertainties that make investments unsuitable.

Effective de-risking requires a combination of instruments.

It is crucial to manage these instruments carefully to:
- Balance the project's risk-return profile to ensure optimal value for money.
- Prevent overlaps to avoid redundancy and minimise the overall cost.

MOST RELEVANT DE-RISKING INSTRUMENTS

for clean hydrogen projects in emerging markets and developing economies (EMDEs) are

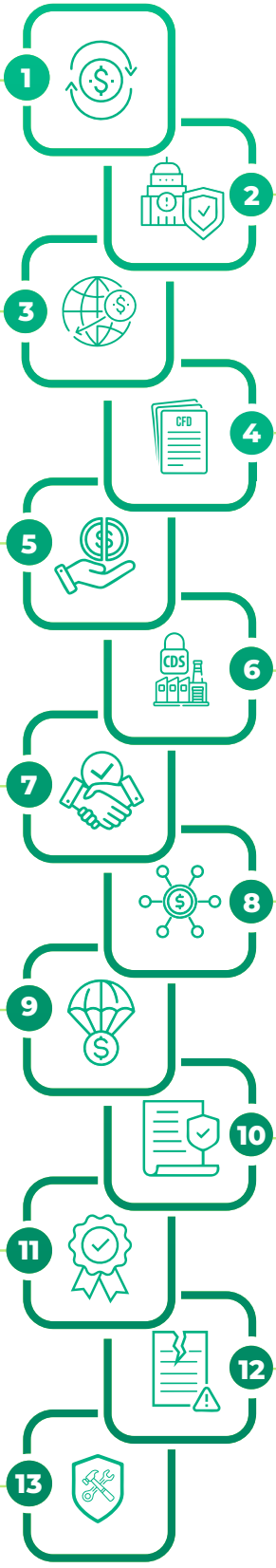
DE-RISKING INSTRUMENTS

CLEAN HYDROGEN PROJECTS

- CFD
- Technology performance guarantees
- Interest rate swaps
- Contracts for difference
- Political risk investments / Foreign investment insurances
- Foreign currency guarantees
- Offtake guarantees

RELEVANT RISK MITIGATION INSTRUMENTS

for large-scale clean hydrogen projects



1 Interest rate swaps

Forward contracts in which one stream of future interest payments is exchanged for another based on a specified principal amount. They can exchange fixed or floating rate payments to reduce or increase exposure to fluctuations in interest rates.

2 Foreign currency guarantee

Designed to protect borrowers from exchange rate fluctuations by allowing an obligor to repay funds in the same currency as its revenue stream, or at a pre-determined rate regardless of prevailing market exchange rates over the agreement period.

3 Political Risk Investment Insurance / Foreign Investment Insurance

Protect against borrower failure to repay in case non-commercial risks materialise, such as expropriation, political violence, currency inconvertibility and transfer restrictions, and breach of contract.

4 Partial credit guarantee

Contractual promise from the guarantee provider to pay the principal and/or interest up to a pre-determined amount. Its main objective is to improve the credit profile of borrowers by decreasing perceived and actual risks of investment losses, thereby increasing confidence among investors.

5 Contracts for Difference

Mechanism to incentivise investment in low-carbon technologies by providing stability and predictability to future revenue streams over a long period. It is based on a difference between the market price and an agreed 'strike price'.

6 Offtake guarantee

Offtake agreement guarantees financial security, such as a letter of credit which is issued by a third party to ensure that obligations under the offtake agreement will be fulfilled, even in case of unforeseen circumstances.

7 Credit default swaps

Designed to insure counterparties against the default of a corporate or sovereign debt issuer. The buyer makes a periodic payment similar to the payments on an insurance policy. In exchange, the seller agrees to pay the security's value and interest payments if a default or bankruptcy of the asset owner occurs.

8 Loan loss reserve (LLR)

Provides partial risk coverage to lenders, meaning that the reserve will cover a pre-specified amount of loan losses.

9 Syndication of Loans

Financing is granted by a group of entities, under the same financial conditions, in order to share the risk among all of them; and it is executed in a single contract, which regulates both the obligations toward the funded party and between the financing entities.

10 Performance guarantees

Reduce uncertainties regarding construction delays, upfront cost overruns, energy or hydrogen production (capacity factor uncertainty), operation and maintenance cost uncertainty.

11 Buyer Credit Guarantees

Provided by a country's export credit agency (ECA), is an instrument that covers most of the risk assumed by a commercial bank towards a foreign borrower or buyer of goods from the home country of the ECA.

12 Contractors-all-risk insurance

Covers risks related to physical loss or damage to works during construction. It is often complemented by a delay in start-up (DSU) coverage that provides protection against delays caused by physical damage.

13 Liquidated damages

Exact amount of money, or a set formula to calculate the amount of money, a party will owe if it breaches a contract, in order to compensate the injured party for its losses.

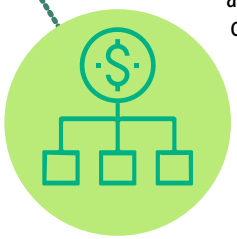
INSIGHTS

INTO SUCCESSFUL ECONOMIC, DE-RISKING, AND FINANCING INSTRUMENTS FOR REACHING FINAL INVESTMENT DECISION

Effective **risk allocation** is essential to secure capital.

Robust **operational frameworks** are essential to manage the complexities associated with large-scale, capital-intensive hydrogen projects.

General national **programmes encouraging sustainable investments and hydrogen-specific programmes** are critical to signal government support.



Strong **public and private partnerships** can create a robust framework and align financial resources and technical expertise, ensuring project implementation and finance scaling.

Optimisation of **debt sizing** and **access to low-cost equity** play a crucial role in effective risk allocation and project cost reduction.

Replicability and scale-up depends on aligning with climate policies, fostering effective partnerships, and ensuring committed financial stakeholders.

International partnerships and coordination mechanisms are essential to scale clean hydrogen financing

Coordination between international initiatives is critical to successfully scaling finance.

Collaboration and dialogue can help to better identify the risks associated with clean hydrogen projects.

Following an analysis of 46 international initiatives aimed at accelerating clean hydrogen financing in EMDEs.

Two-thirds of all initiatives are led by MDBs, DFIs, and International Organisations.

Three-quarters of the identified initiatives target renewable hydrogen.