

New Approaches to Climate Finance

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"[...] The developing world will need \$5.9 trillion till 2030 for its Nationally Determined Contributions, and an additional \$4 trillion each year for clean energy technologies to meet zero emission goals."

Amitabh Kant, G20 Sherpa, Government of India

New Approaches to Climate Finance

1. Market Structure – Building confidence





1. Market Structure – Building confidence

Defining the market structure early builds tremendous confidence with investors

- I. Understanding, quantifying and pricing risks
- II. Market-making
- III. Getting markets moving early via mandates
- IV. Guarantee structures



Risk Register

Value Chain Risks

1. Market Risks
2. Commercial Risks
3. Technology Risks
4. Project Risks
5. Execution Risks

Systemic Risks

1. Policy Risks
2. Standards & Regulatory Risks
3. Credit Supply Risks (finance)
4. Eco-System Risks (supply-chain/materials)
5. Global Macro Risks

More than 40 risks identified under 10 main risk categories



Value chain risks

RE Power

1. Renewable energy generation capacity risk
2. Intermittency issues
3. RTC power capacity constraints
4. Grid/Transmission

GH2 Production

1. GH2 / Derivatives production risk (CUF efficiency)
2. Technology maturity risk

GH2 Storage/Transport

1. GH2/Derivatives storage risk
2. Storage capacity risk
3. GH2/Derivatives transport risk
4. Transport capacity risk

GH2 Markets

1. Domestic Demand risk
2. Domestic market segments variable demand risk
3. Off-take risk
4. Lack of trading-markets (spot/futures)
5. Lack of price curve
6. Market development/speed mismatch risk
7. International demand risk
8. Export market segments' risk

Project and Execution Risks

1. Developer Execution capacity and capability risk
2. Lack of project pricing benchmarks
3. Land
4. Water
5. FID/Financial Closure
6. ESG risks



Eco-system risks

Policy

1. Commitment to growing the market (or lack of)
2. Lack of subsidies, incentives
3. Fragmented or Multiple agencies involved in policy development

Standards and Regulatory

1. Own/Global standards
2. Harmonising with exports

Credit Supply

1. Liquidity in banking system
2. Dry-powder in asset management
3. Risk appetite
4. Local interest rates
5. Inefficient carbon/green-credit markets
6. Fx Risks for international transactions
7. Lack of insurance products

Eco-system/Supply chain

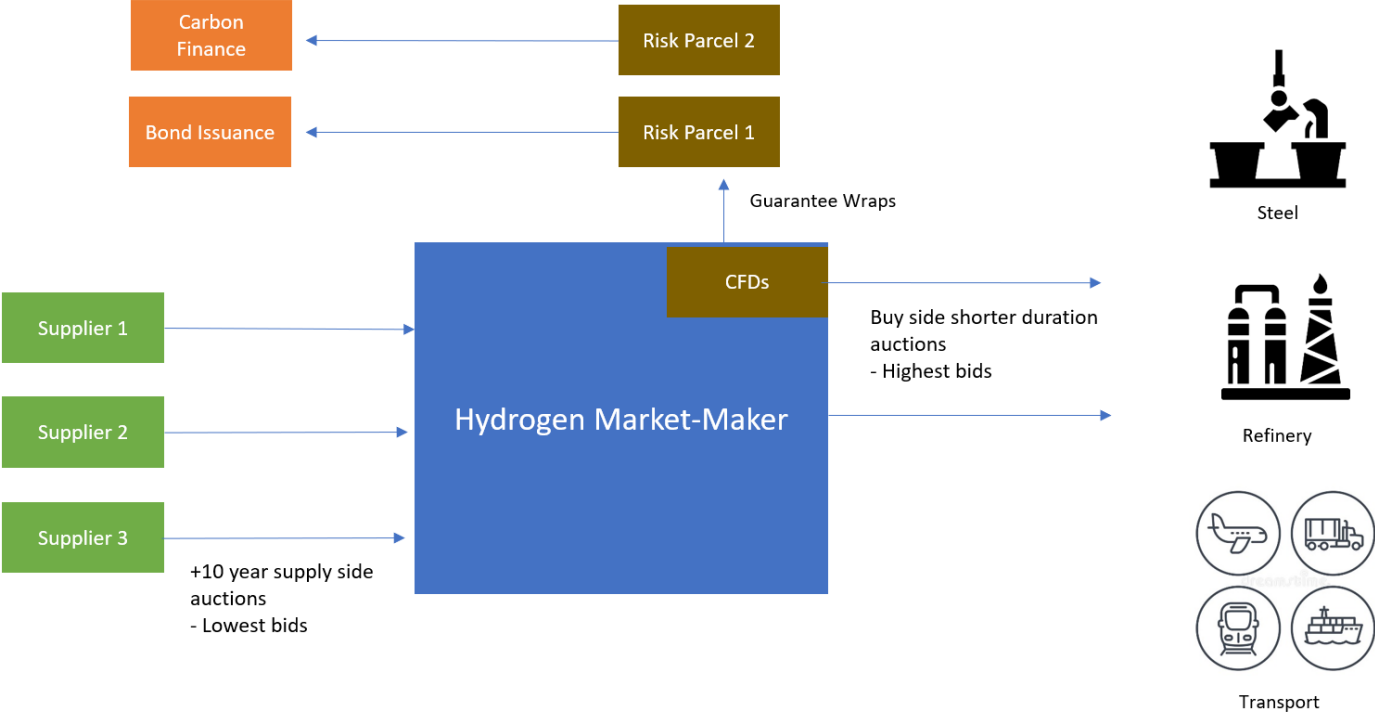
1. OEM supply capacity risk
2. Materials access risk
3. Global shipping risk

Global Macro

1. Climate and Natural disasters
2. Pandemic
3. Global conflicts
4. Global interest rates
5. Global inflation
6. Political/Geo-political
7. Conflicting or cross-purpose lobbying



Market Maker



New Approaches to Climate Finance

1. Market structure – building confidence
2. Bring in wholesale finance





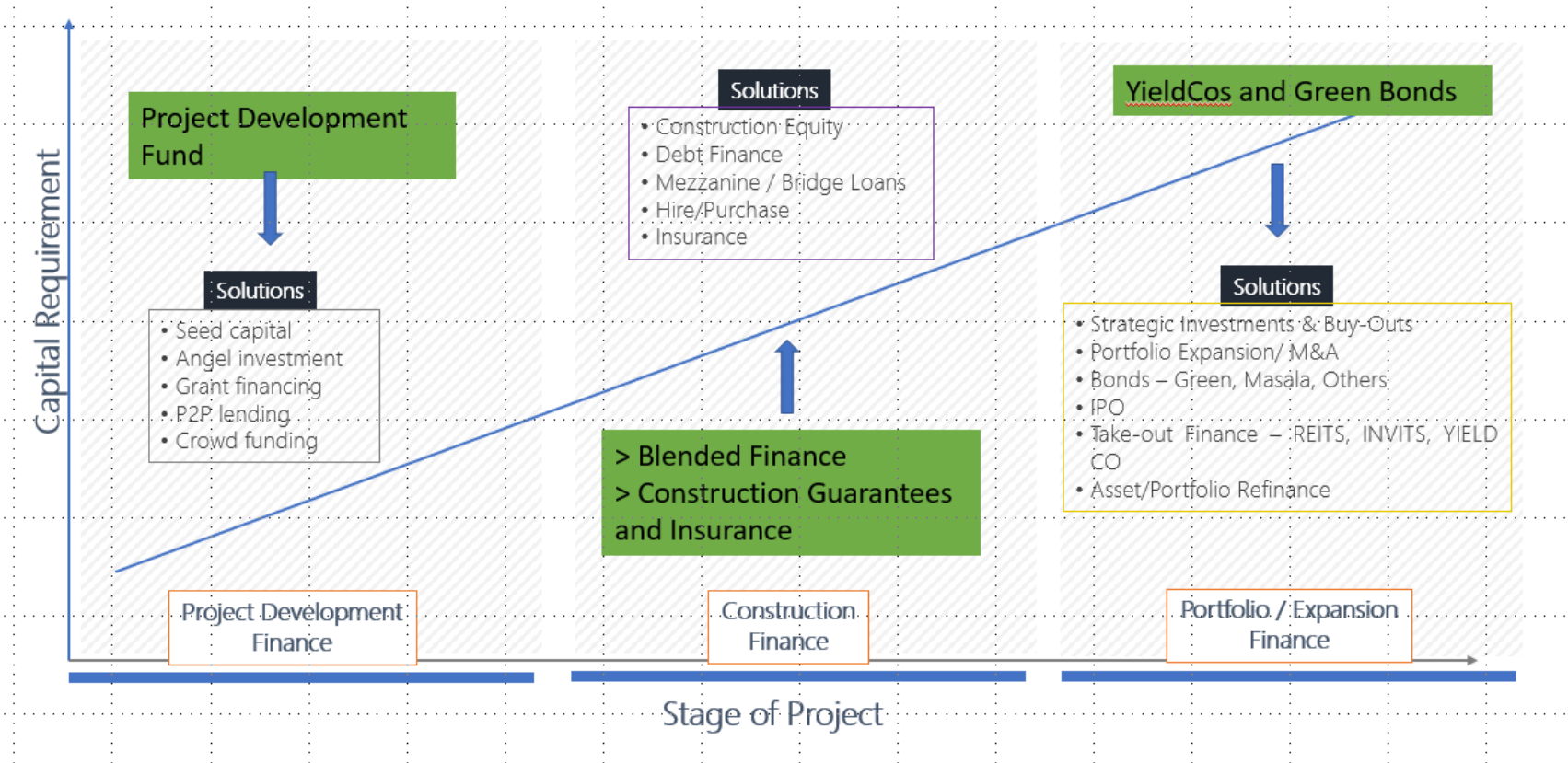
2. Wholesale Finance

Critical to create in-market wholesale liquidity with existing or new fit-for-purpose financing entities

- I. Establishing the financing continuum
- II. Churning capital
- III. Connecting to institutional investors
- IV. Fund of Funds
- V. Bond markets
- VI. Fx

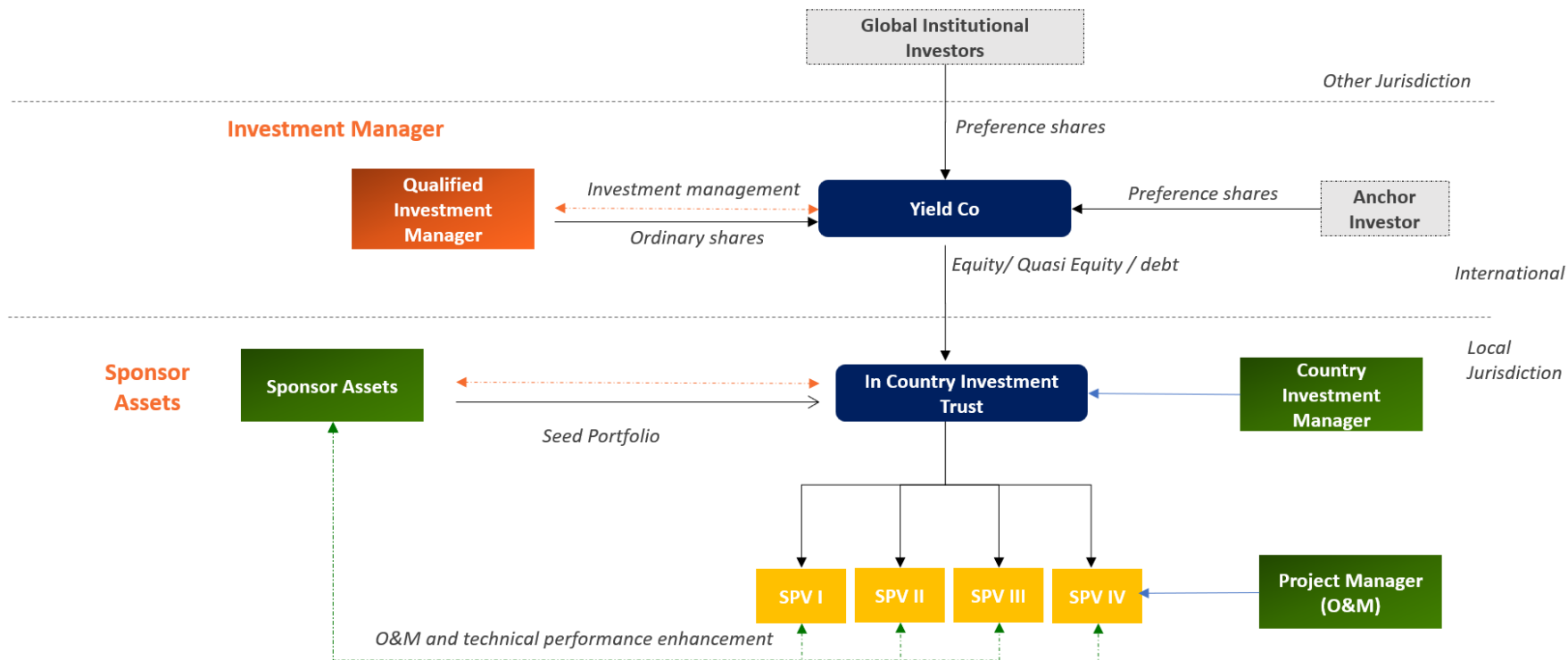


Financing Continuum





Connecting to Institutional Capital



New Approaches to Climate Finance

1. Market structure – building confidence
2. Bring in wholesale finance
3. Concessional capital





3. Concessional Finance and Innovative Instruments

Climate and energy transition requires a scaffolding in the form of concessional and innovative finance

- I. Concessional Finance
- II. Find efficiencies through innovative finance
- III. Library of financial structures and instruments



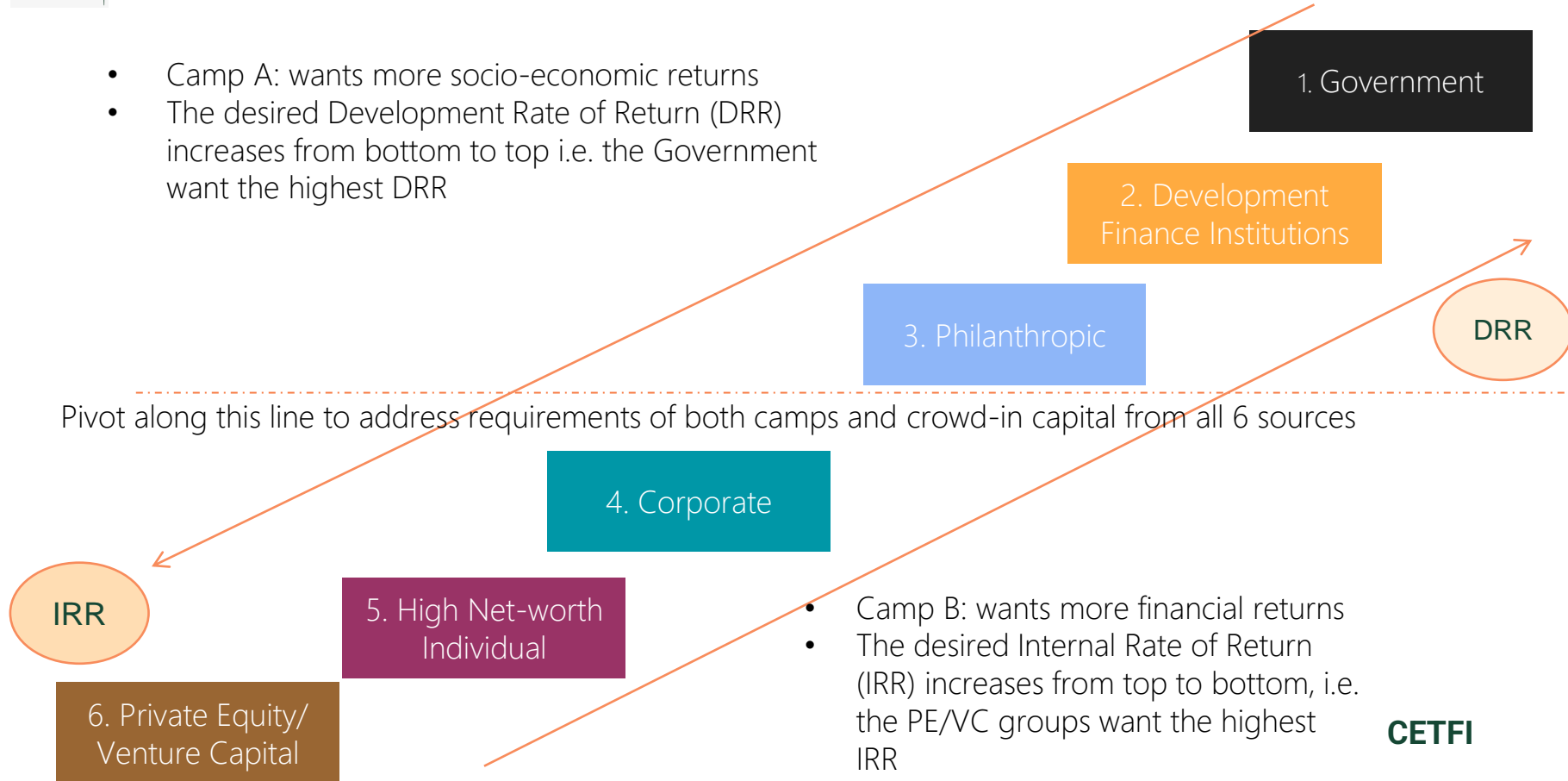
Library of Financial Structures and Instruments

1. Structures	2. Facilities	3. Instruments	4. Incentives	5. Grants/Subsidies	6. DSS Tools
<ol style="list-style-type: none">1. GH2 Market-Maker and Aggregator2. GH2 Sector /Segment Trading Institution3. GH2 Spot markets4. GH2 Futures market5. GH2 Capacity Leasing or Tolling6. GH2 Certification and validation7. YieldCos8. Technology transfer & commercialisation9. Government to Government Fx Swaps	<ol style="list-style-type: none">1. Exports Enabling Facility2. Project Development Facility3. Interest Rate Subventions4. Technical Assistance5. Single Window Clearance6. National GH2 Quality Testing Centres	<ol style="list-style-type: none">1. Credit Enhancements2. Commercial Fx-Derivatives3. Technology Performance Guarantees4. Liquidated Damages Insurance5. Credit Insurance6. Export Credits7. Green Bonds8. Outcome Based Bonds9. Carbon Credits10. Construction insurance / wraps11. Inflation and Tracker based GH2 pricing indices12. Dollar Denominated or indexed off-take agreed	<ol style="list-style-type: none">1. Performance/ Production Linked Incentive2. Tax Credits	<ol style="list-style-type: none">1. Contract for Difference2. Viability Gap Funding / Capital Grants3. Long-distance electricity transmission charges - waiver	<ol style="list-style-type: none">1. Round the Clock Power planning tool2. Hydrogen Valleys DSS3. Demand/Supply forecasting4. Energy Density for Hydrogen use-cases5. Hard To Abate sectors decarbonisation intervention toolkit



Making blended finance work

- Camp A: wants more socio-economic returns
- The desired Development Rate of Return (DRR) increases from bottom to top i.e. the Government want the highest DRR



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1. Market structure – building confidence
2. Bring in wholesale finance
3. Concessional Capital
4. Making technologies affordable





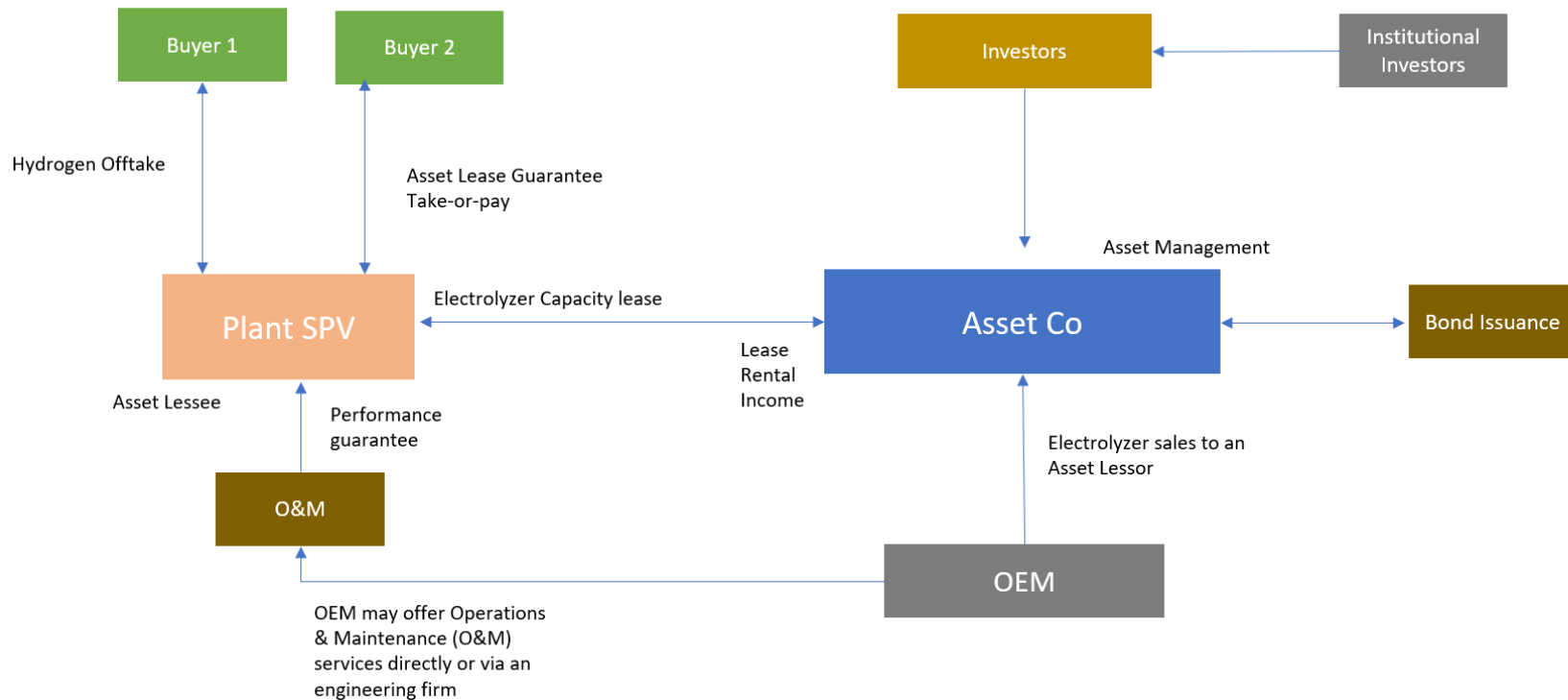
4. Making technologies affordable

Climate technologies need to be emerging markets ready & affordable

- I. Making technologies affordable
- II. Economies of scale
- III. Infrastructure as a service

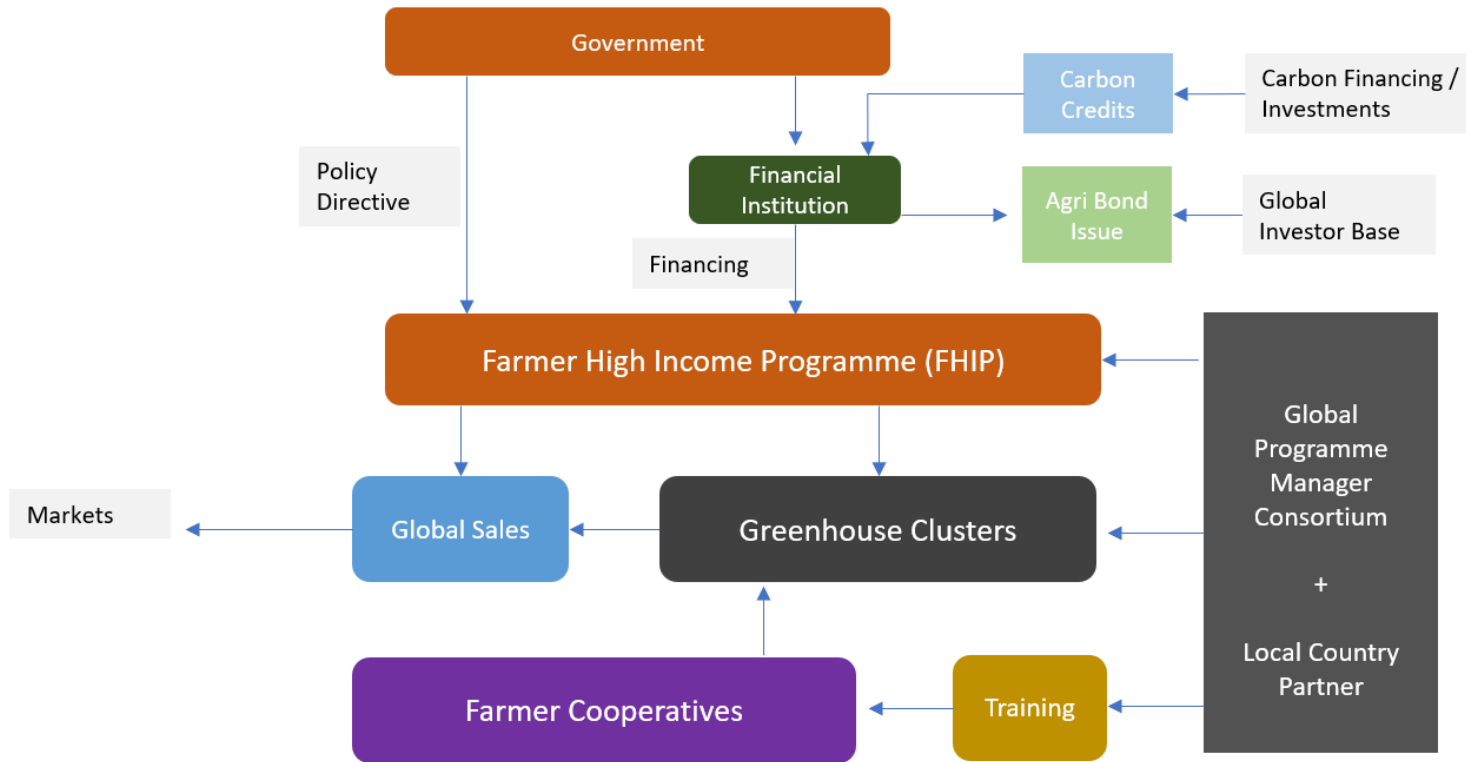


Capacity Leasing model





Infrastructure as a Service



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4. Making technologies affordable
5. Carbon finance





5. Carbon Finance

Carbon price is the paramount tool in the battle against climate change

- I. Compliance Markets
- II. Confidence and Transparency in Voluntary markets
- III. Global acceptance of a minimum carbon price (floor)

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3. Concessional capital
4. Making technologies affordable
5. Carbon price
6. Lighthouse projects





6. Lighthouse Projects

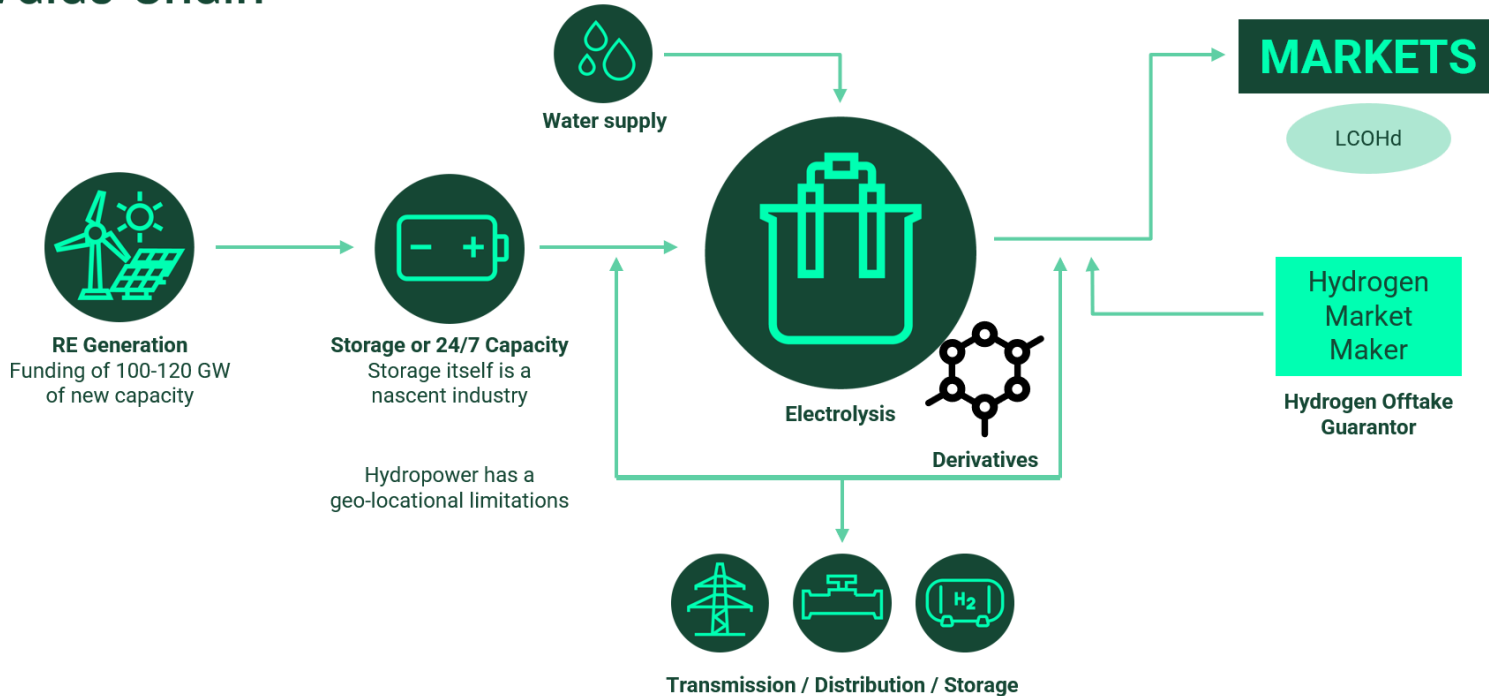
Embracing mantra of no-regret investments stands as a fundamental principle in the pursuit of addressing climate change

- I. Shadow policies, regulations and standards
- II. Decarbonise hard-to-abate sectors
- III. Focus on natural capital
- IV. Establish “pilot” eco-systems and value-chains
- V. No regret investments



Demonstrating value chains

Value Chain



Climate and Energy Transition Finance Initiative - CETFI

