



# Work Package 5

## Financing and incentivisation

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# Main policy issues and presentation outline

- Financing
- Incentivisation
- Disincentivisation
- Investment risk



# Main research questions

- Status of existing policies
- Barriers/opportunities for including CCS in the CDM
- Main cost/risk issues for CCS commercialisation
- Cost/risk issues for vanguard projects, and how these have been overcome
- Cost/risk issues that have caused projects to be restructured, halted or cancelled
- Novel policies that can be recommended to promote investments in CCS RDD&D

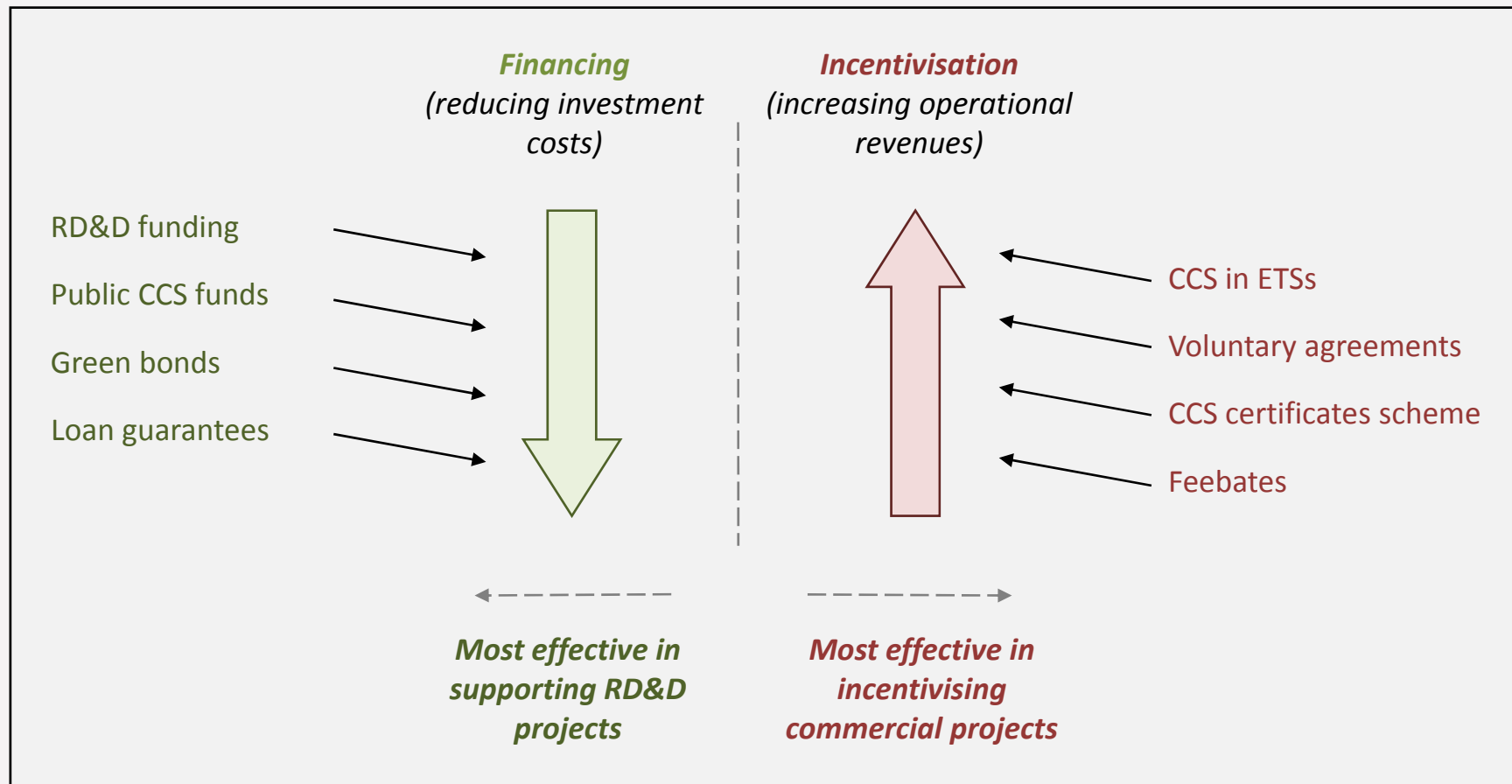


# Research input

- Questionnaire
- International policy examples
- Other CCS research projects
- Literature study
- Deployment projects
- Restructured, halted, and cancelled (RHC) projects

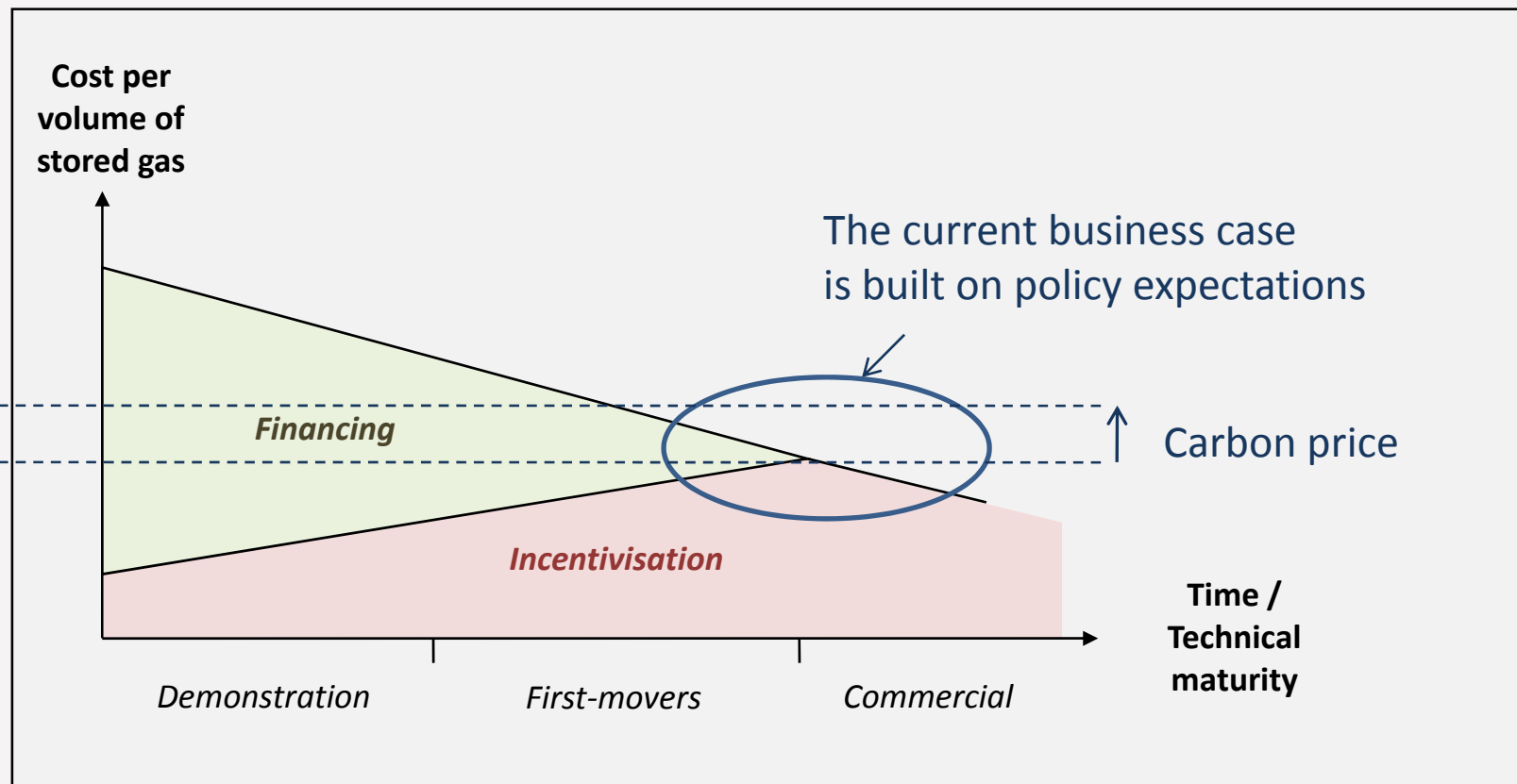


# Financing and incentivisation (1)



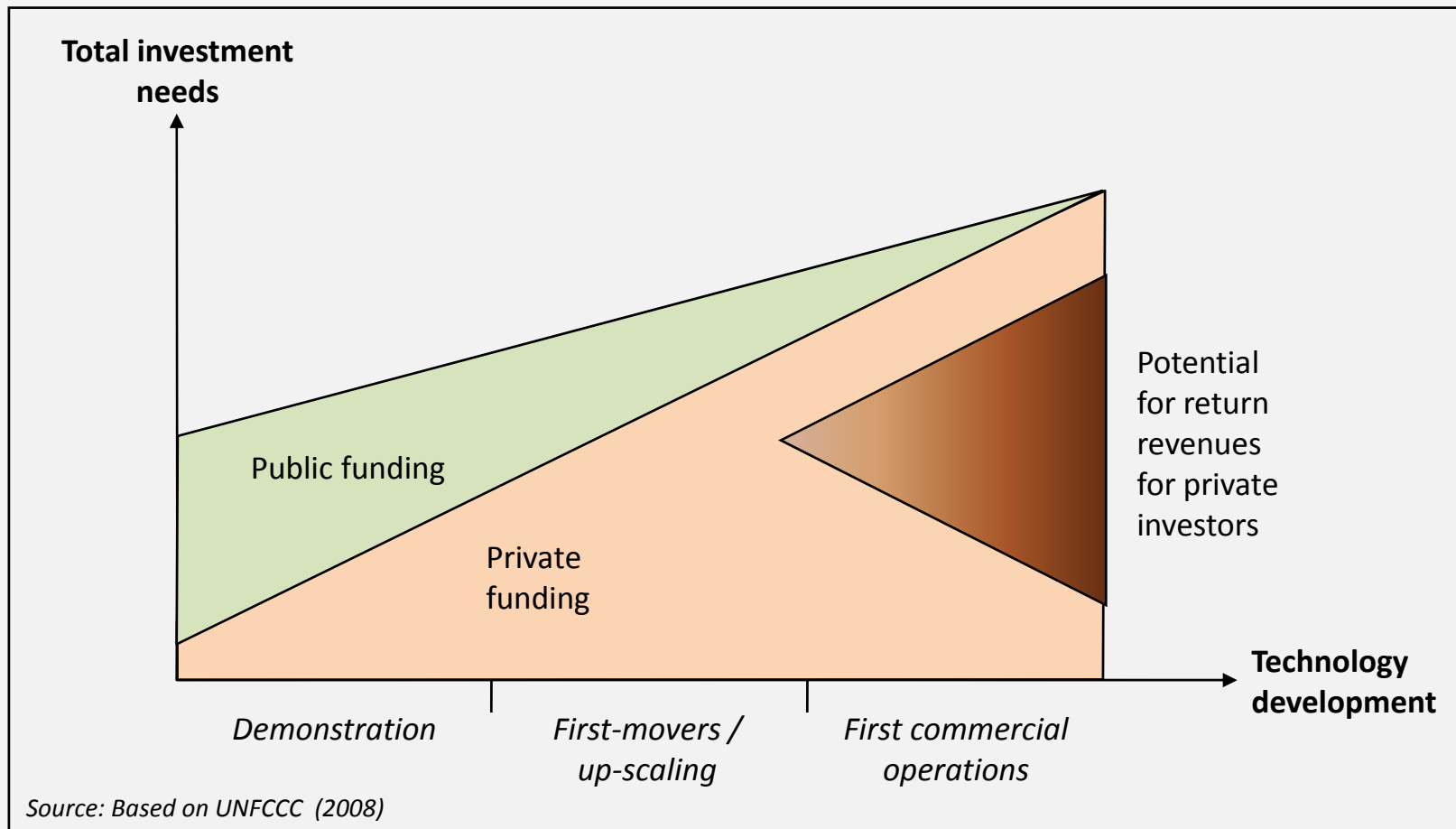


# Financing and incentivisation (2)





# Financing and incentivisation (3)





# Financing and incentivisation (4)

- Business finance pilot projects
- Demonstration projects needs financing and incentivisation
  - Capital costs
  - Operational costs
  - Investment risks
- Focus on emissions trading
- Financing mechanisms is lacking
- Adjusting existing policies (such as OSPAR) is a prerequisite, not incentivisation

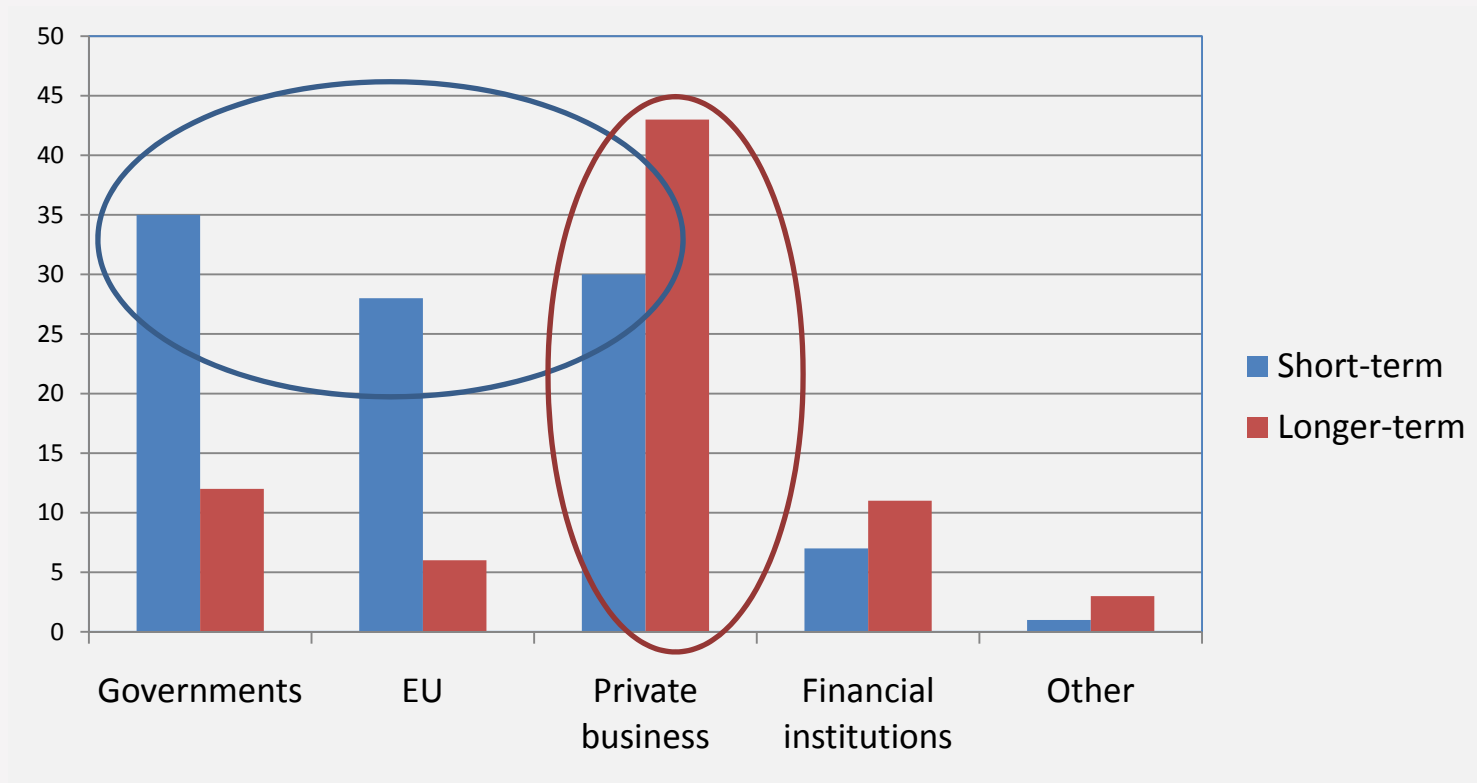


# Financing and incentivisation (5)

- Financing policy suggestions
  - Public private partnerships (PPPs)



# Financing and incentivisation (6)



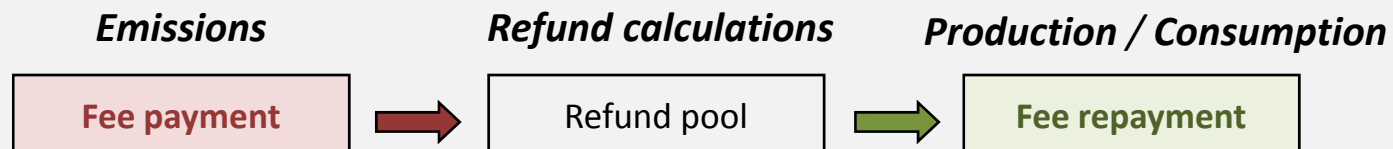


# Financing and incentivisation (7)

- Financing policy suggestions
  - Public private partnerships (PPPs)
  - Green bonds
  - Technology competitions
- Incentivisation policy suggestions
  - Refunded emission payment schemes (“feebates”)

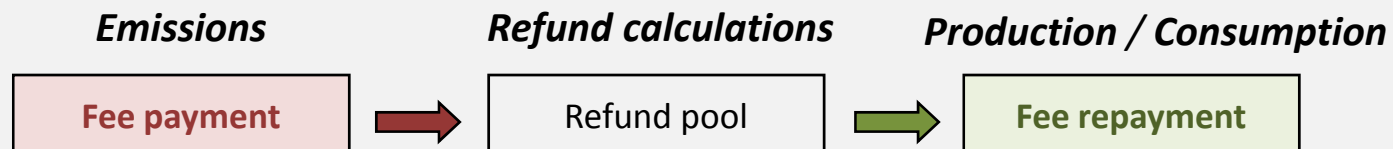


# Financing and incentivisation (8)

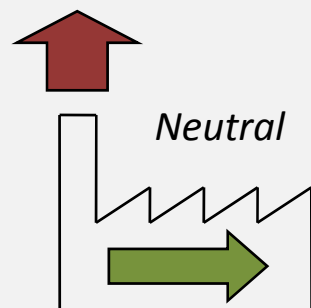




# Financing and incentivisation (8)



Large fee /  
Large repayment



Large production /  
Large emissions



# Financing and incentivisation (9)

- Financing policy suggestions
  - Public private partnerships
  - Green bonds
  - Technology competitions
- Incentivisation policy suggestions
  - Refunded emission payment schemes (“feebates”)
  - Negotiated voluntary agreements
  - The focus on emissions trading is a problem
  - CCS not recommended in the CDM at this stage

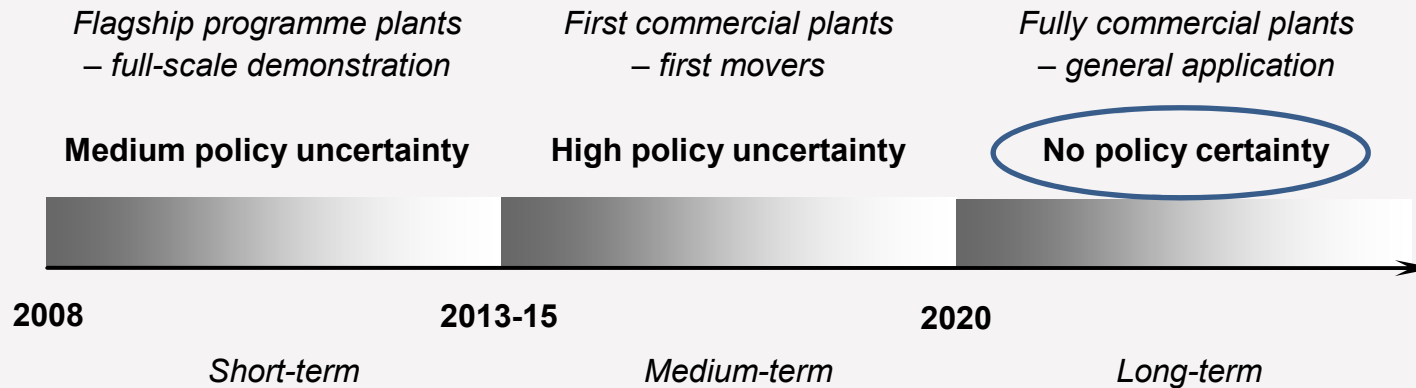


# Disincentivisation (1)

- Short-term and complex policies
- Uncertain policy environment



# Policy outlook highly uncertain





# Disincentivisation (1)

- Adjusting existing framework not incentivisation
- Short-term and complex policies
- Uncertain policy environment
- Lack of policies
- Lead time in adoption of policies
- Lack of knowledge
- **Policymaking under uncertainty**



## Disincentivisation (2)

- Policy suggestions
  - Participatory policy processes
    - Identify main deployment obstacles
    - Joint language
    - Technology deployment scenario
    - Joint and credible policy development outlook
    - Consensus building
  - The aim: increased policy stability



## Risks (1)

- CCS face high investment risks
  - Costs
  - First-mover uncertainties and higher costs
  - Policy obstacles
  - Interdependence
  - Storage, etc...
- Insurance capacity is low



## Risks (2)

- Policy suggestions
  - R&D support on geological issues
  - Facility for guidance on CCS infrastructure development
  - Participatory policy processes
  - RDD&D support
  - Risk sharing facilitation
  - Long-term policies



## Conclusions (1)

- The business case for CCS is fragile and is dependent on a credible policy outlook
- Financing can kick-start demonstration
- Emissions trading likely to be too little, too late
- Move from CCS policies to CTS policies
- A robust liability and insurance solution
- CCS in the CDM not recommended at present



## Conclusions (2)

- The stakeholder dialogue needs to be improved
  - Establish a common terminology to facilitate a well-functioning dialogue
  - Utilise business policy experience in a policy learning process
  - A joint global CCS agency



# Thank you for your attention!

For further information:

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And now... Questions!



## Incentivisation and Financing issues in China

- Lack of regulation is Disincentivisation
- Main risks are Policy uncertainty and IPR risks (pilots/demos), liability & storage risk
- Lack of CDM applicability
- Roadmap (5YP) would give policy security
- Mandatory capture ready?



## Applicable Financing Schemes

- Carbon Trading Schemes
- Existing Technology Platforms (863, 973)
- Financial Investment
- Taxation
- Government Subsidies (Feed-in tariffs/premiums)
- Public Private Partnerships (SICAV)