

# Reducing Greenhouse Gas Emissions in India

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## Financial mechanisms and opportunities for EU-India collaboration

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# Barriers to reducing emissions: Finance

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NPV costs over project lifetime (eg renewables)

□ **Additional** finance needed:

→ Grants (GEF, development aid)  
Carbon market

Up-front capital costs (eg higher efficiency coal plant)

□ **Up-front access** to finance needed:

→ Grants (GEF, development aid)  
Concessional loans (development aid, climate funds)  
Equity

Both in tandem

# Barriers to reducing emissions: Technology

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## Technology transfer needed

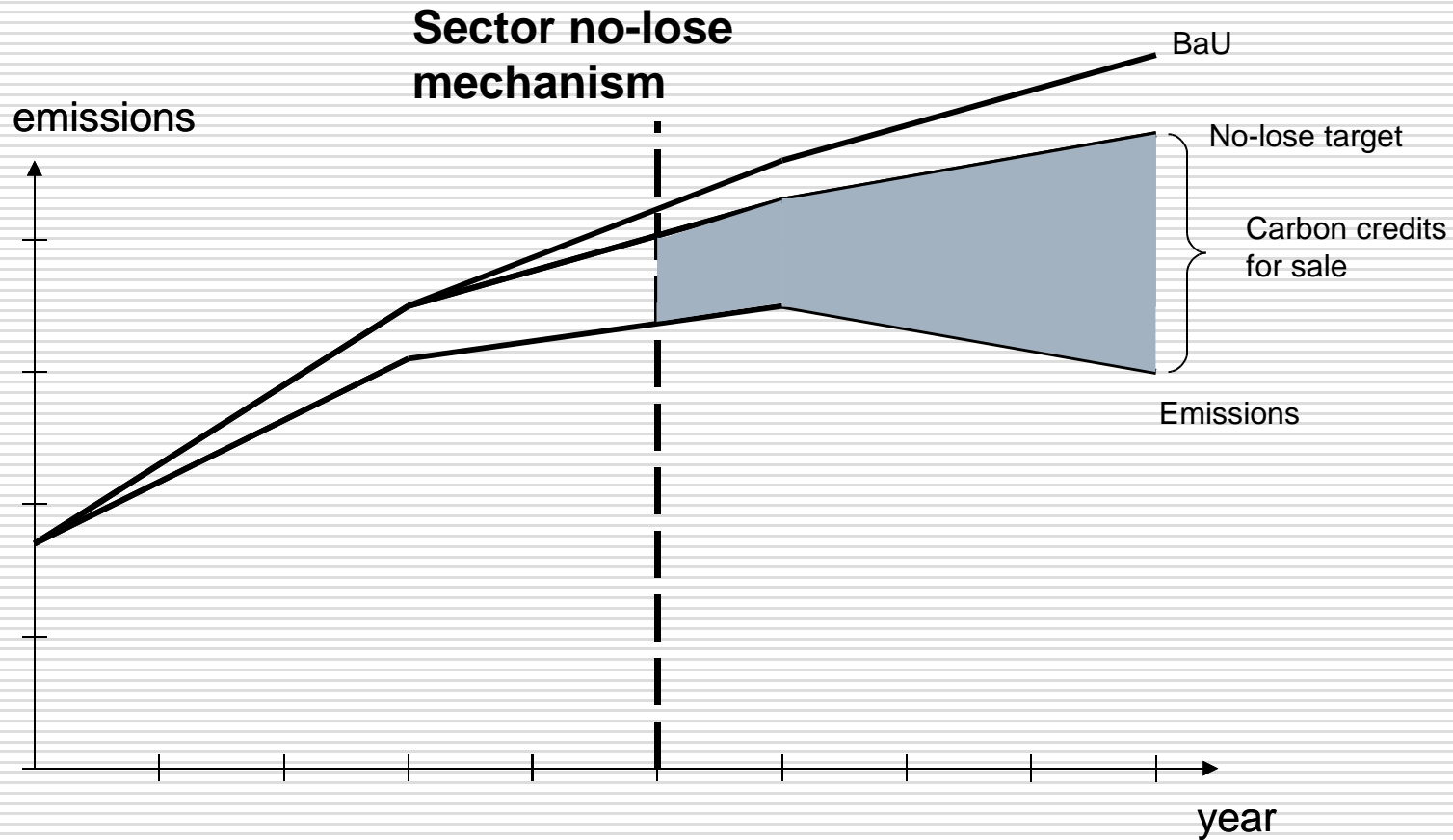
- IPR a sticking point – Technology financing mechanisms, joint R&D
- Lack of connection between supply and demand, especially for SMEs – Role of ESCOs
- Development of ESCOs in India is constrained by lack of access to finance

# EU proposal on sectoral approaches

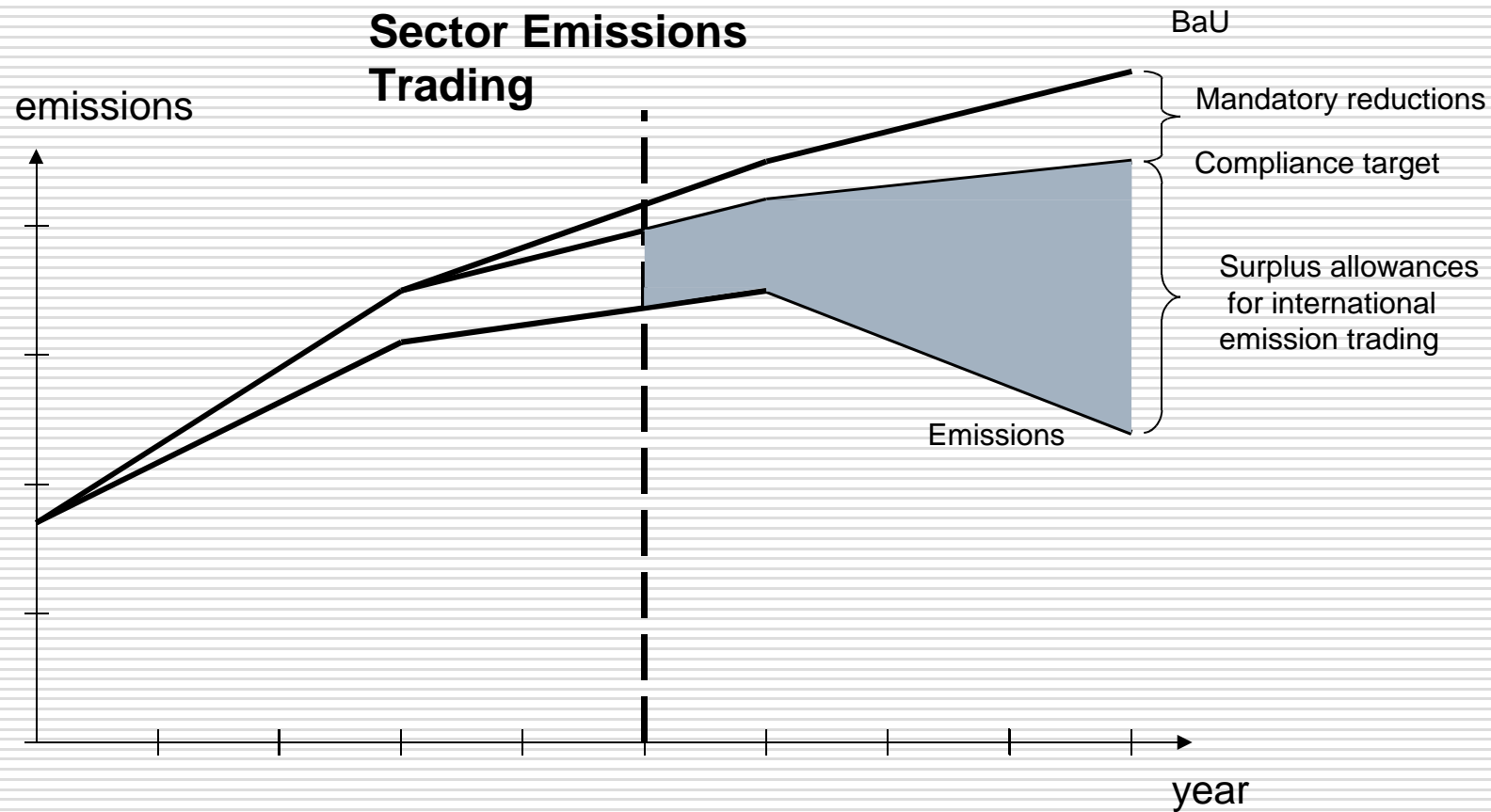
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- Sectoral crediting:
  - Sector CDM
  - Sector no-lose mechanism
  
- Sector Emission Trading

- Target sufficiently below BaU
- No penalty for not reaching target: "no-lose"



- Mandatory reductions
- Tradable units are issued ex-ante



# Views on sectoral proposals

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## EU:

- significantly scale up finance for mitigation action in DC:s
- significantly strengthen DC:s engagement in mitigation action
- reduce potential emission leakage by capturing all sectoral emissions
- reduce administrative costs to participants
- reduce competitive distortion

## India:

- will not overcome the lack of participation, hence low tech transfer
- too many small entities
- lack of data
- India rather wants to introduce energy efficiency certificate scheme

# Technology cooperation

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- A key issue
- CDM little technology transfer
- Intellectual Property Rights
- Technology acquisition:
  - Compulsory licensing
  - Buy out patents
- Collaborative R&D

# Black carbon

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- 2nd most important climate forcing (60% of CO<sub>2</sub>)
- Dark particles warm atmosphere directly
- Less reflection from snow and ice – faster melting
- Major health problem (400,000 deaths annually in India)
- Not in UNFCCC, not on agenda

# Specific Initiatives

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- **Solar**
  - Both thermal concentration and PV
  - Grants? for higher costs
  - Investment funds? for higher capital costs
  - Joint research activities, with addressed IPR
  
- **Energy Efficiency**
  - Venture capital to ESCOs
  
- Renewable energy (venture capital)
  
- Programmatic CDM (revolving fund)

# Conclusions

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- Energy sector transformation will be vital if growth in GHG emissions are to be reigned in
- India has introduced some sound domestic policy initiatives that, if successfully implemented, will have the effect of reducing emissions
- Scope for EU to assist India implementation
- Existing financial mechanisms inadequate so far
- Low level of technology transfer
- India unconvinced of the merits of various sectoral approaches