

2013

2015

2020

2025

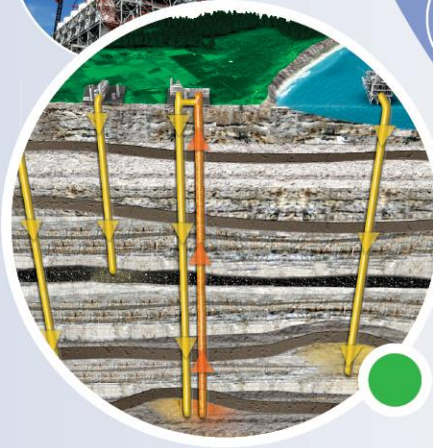
2030

2035

2040

2045

2050



Carbon Capture and Storage: What support is needed and how the UNFCCC can help

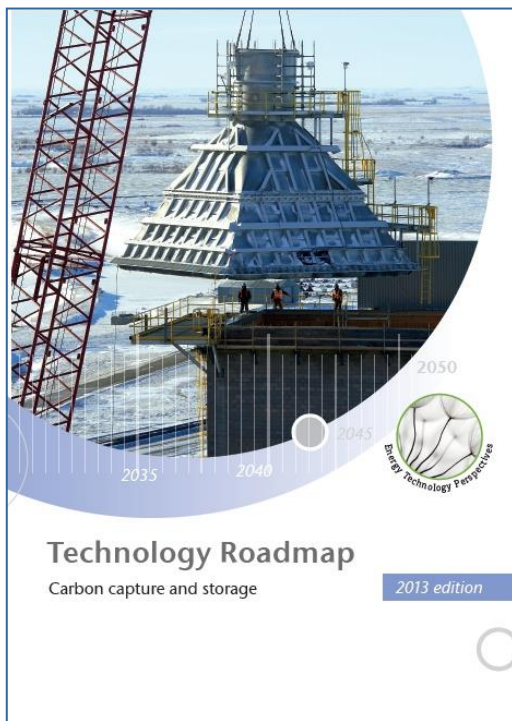
Technical Experts' Meeting on CCS
Bonn, 21 October 2014
Ellina Levina, IEA



IEA CCS Roadmap:

Seven key actions for next seven years

1. Introduce **financial support mechanisms** for demonstration and early deployment.
2. Develop laws and regulations that effectively require new-build power capacity to be **CCS-ready**.
3. Significantly increase efforts to **improve understanding** among the public and stakeholders of CCS technology.
4. Implement policies that **encourage storage** exploration, characterisation and development for CCS projects.
5. Reduce the **cost of electricity** from power plants equipped with capture through continued technology development.
6. Prove capture systems at pilot scale in **industrial applications**.
7. Encourage efficient development of CO₂ **transport infrastructure**.



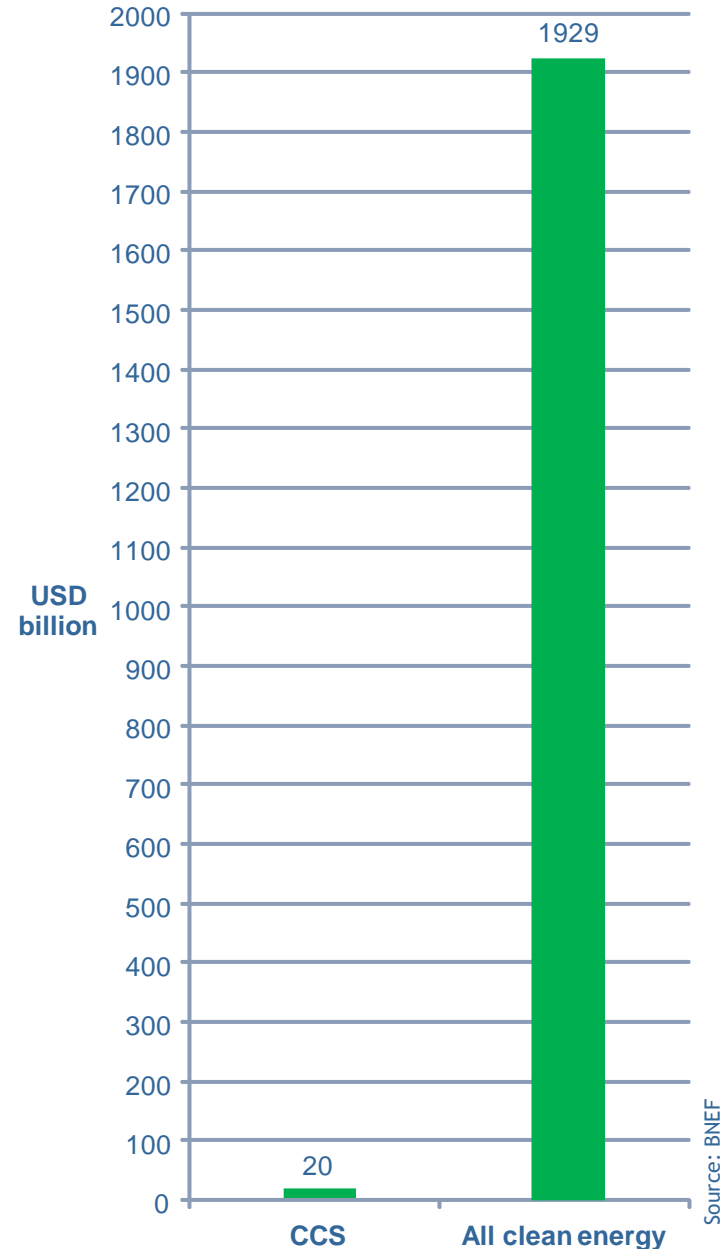


Strong policy drives investment

Clean energy investment* between 2004-2013 (USD):

CCS:
20
billion

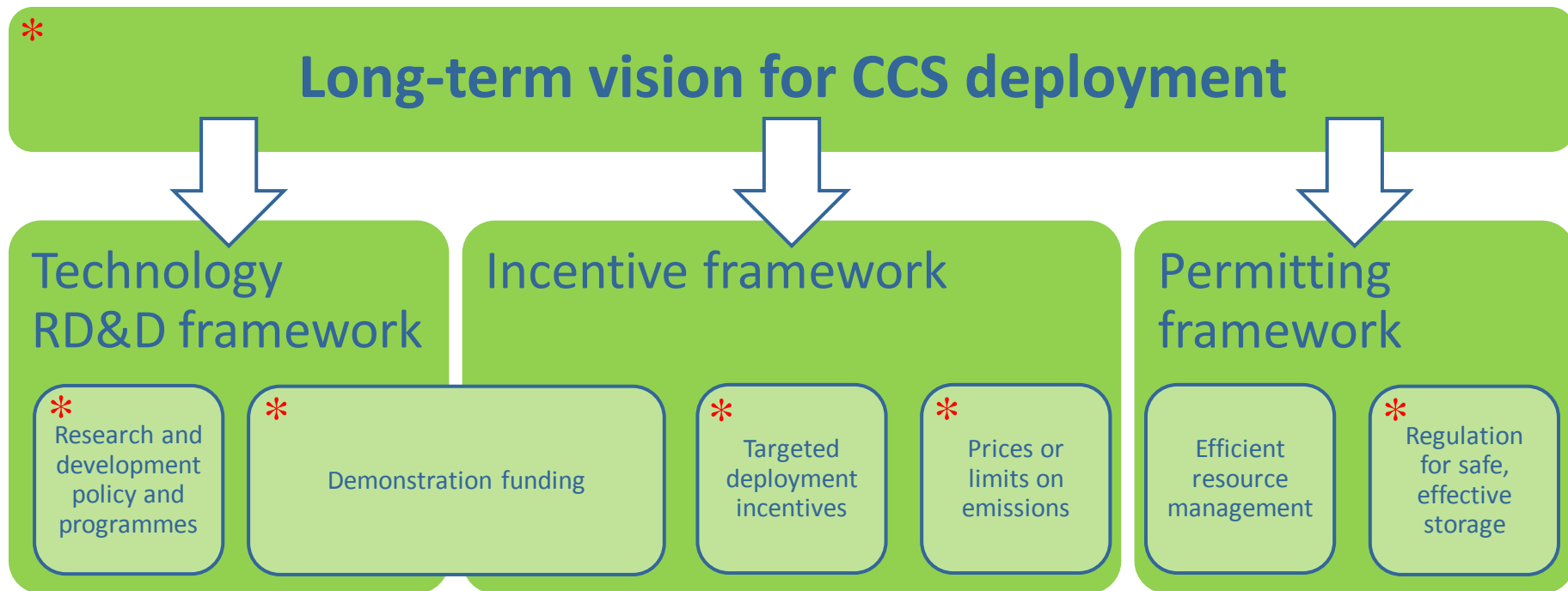
All clean
energy:
1929
billion



* Includes technology development, projects, M&A. Source: BNEF.

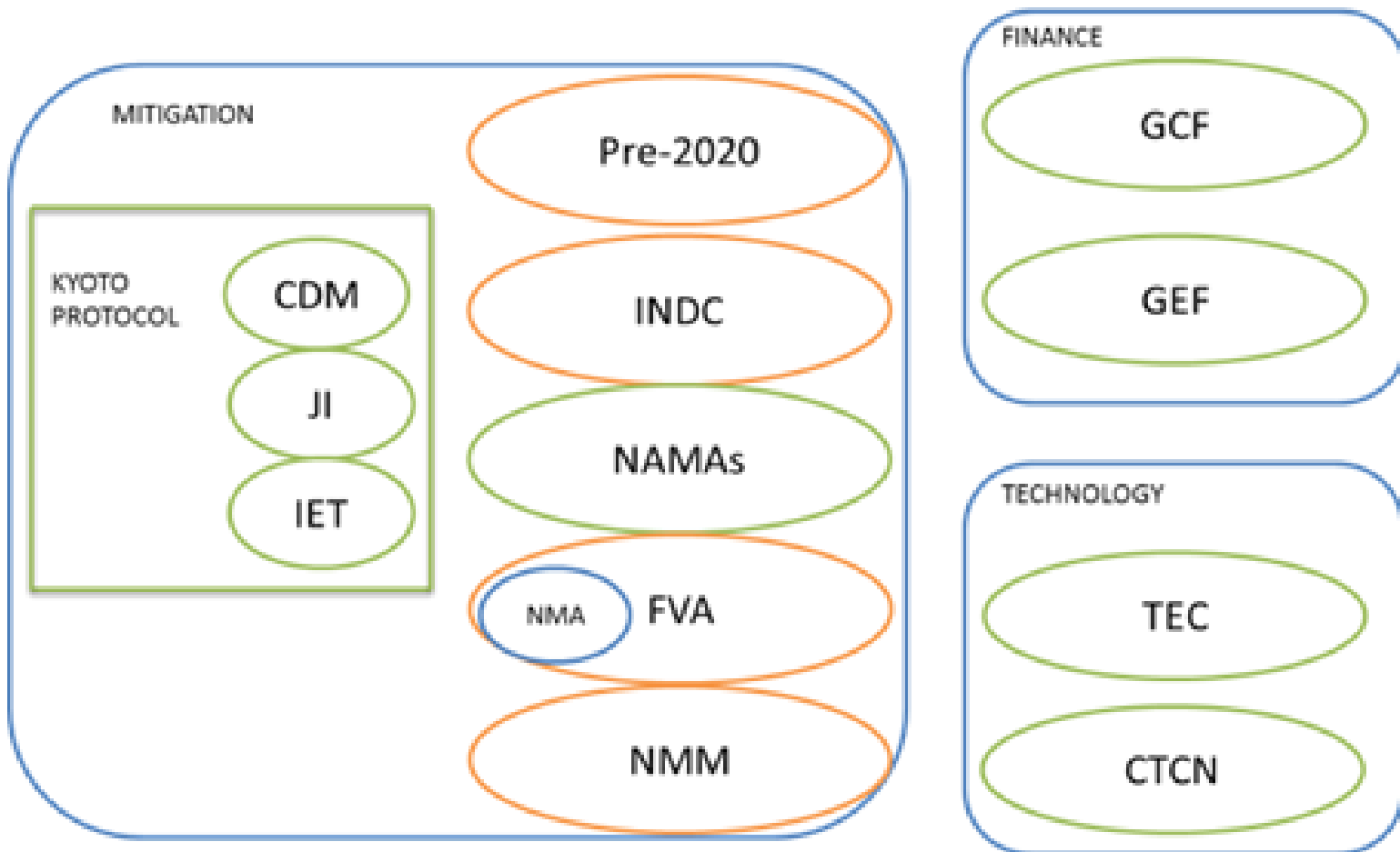


3. Drivers and supportive policies are essential



** UNFCCC process critical for shaping policy environment for clean energy including CCS: Ambitious climate targets, Technology Mechanism, Green Climate Fund, CDM, incl. modalities and procedures etc.*

Relevant UNFCCC mechanisms



- mechanisms under the negotiations
- agreed mechanisms under implementation



How can UNFCCC mechanisms help CCS?

“Intended Nationally Determined Contributions” could include:

- % of CCS in relevant regional energy scenario analysis
- Mt of CO₂ captured and stored
- GW of power generation capacity equipped with CCS
- policy actions and mechanisms supporting CCS
- investments in R&D and long-term CCS development

Technology Mechanism could

- provide unbiased up-to-date information on CCS
- support international partnerships that already exist on CCS
- include consideration of CCS in technology needs assessments of developing countries with high reliance on fossil fuels



How can UNFCCC mechanisms help CCS?

NAMAs could include CCS if funds are available for long-term investments and:

- include support for legal work to make CCS a legal activity and define all necessary safety requirements
- consider support for CO₂ storage exploration
- support CCS projects' capital and/or operating costs

The Green Climate Fund could

- actively highlight the availability of funds for CCS projects and
- potentially include a specific earmarked funding window for CCS



Enhanced pre-2020 climate action could facilitate CCS through:

- support for CCS pilots in industrial sectors
- support for CCS large-scale projects that are already in advanced stages of development
- development of CCS-related regulations
- CO₂ storage assessments to identify specific storage sites
- capacity building and support for pilot projects in non-Annex I parties with high potential for CCS
- R&D work and international cooperation on CCS R&D

By means of:

- the work performed by the TEC and CTCN
- Encouraging relevant work outside of the UNFCCC



THANK YOU!

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DOWNLOAD THE ROADMAP AT:

<http://www.iea.org/topics/ccs/ccsroadmap2013>