The Kyoto Protocol: Consequences and Opportunities for Transformation

Increasing the contribution of the CDM to the post-Kyoto era

Conference on

"Global Warming: Looking Beyond Kyoto"

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Ken Newcombe

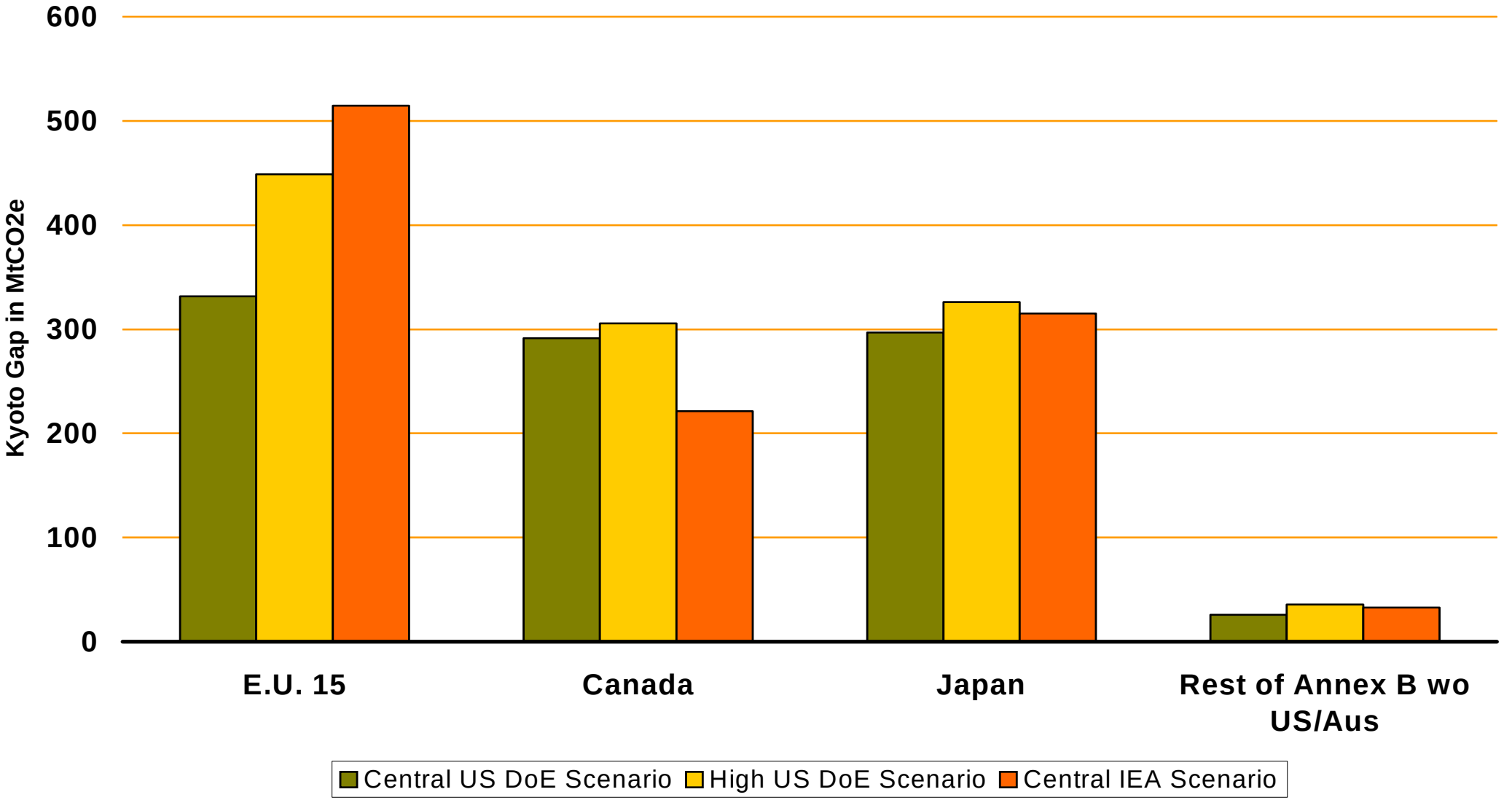
Working Hypothesis

- CDM trade will meet no more than a third of the OECD's emerging compliance gap resulting in increased pressure on AAU trade and increasing the risk of non-compliance
- As currently operating, CDM will not make an important contribution to low carbon energy systems, improved land management for increase climate resilience and poverty alleviation and will fall far short of its potential in transforming solid and liquid waste management systems

CDM's Contribution to Post-2012 Climate Management Regime

- CDM's track record demonstrates that project-by-project approaches are incompatible with future carbon market needs. These are:
  - Very low transactions costs
  - High transparency and simplicity in regulations
  - Low regulatory risk that carbon assets contracted will have compliance value, allowing carbon revenues streams to be monetized and cover the incremental cost and risk of low carbon development
  - Catalyzing high volumes of transactions and investment

Projected Gap of Annex II: 945 – 1116 Mt/yr



OECD Compliance Gap

- Ratifying OECD's cumulative target reductions will be **5-5.5 billion tons of carbon dioxide** below 1990 levels by 2012 based on their Kyoto obligations

- If half emissions reductions are achieved domestically the "compliance gap" to be met through trade with developing countries and transition economies through 2012 would be 2.5 – 3.0 billion tons

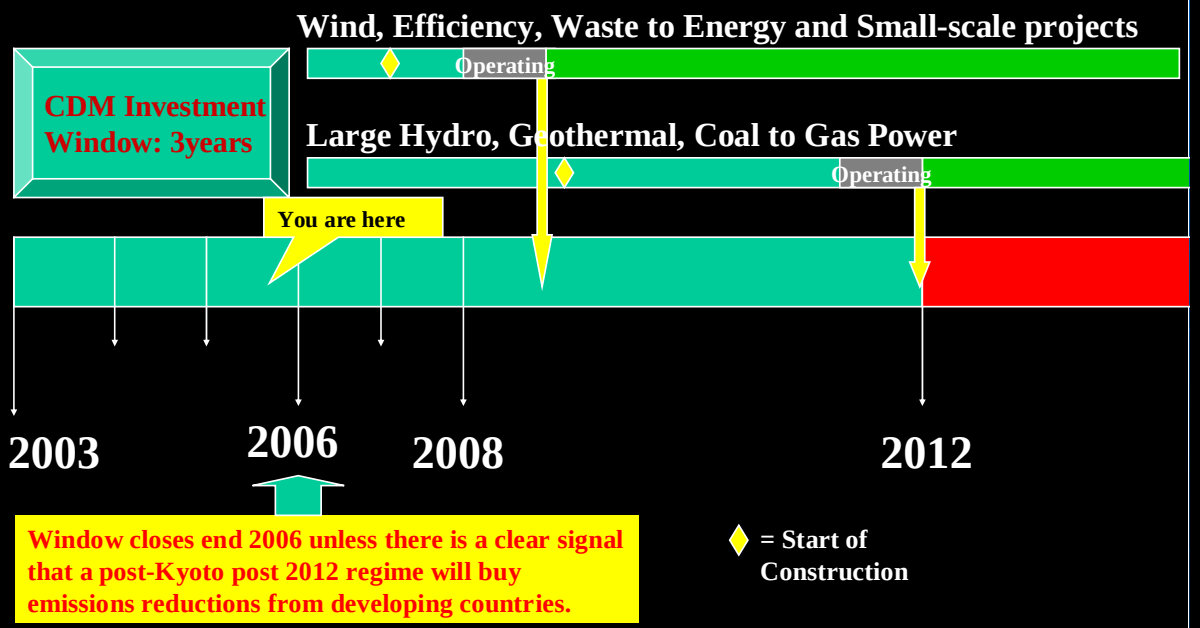
- This compliance gap is over 10 times the current carbon purchase contract volumes reported in the 2005 market intelligence report

Sources of Supply to fill the Compliance Gap - CDM

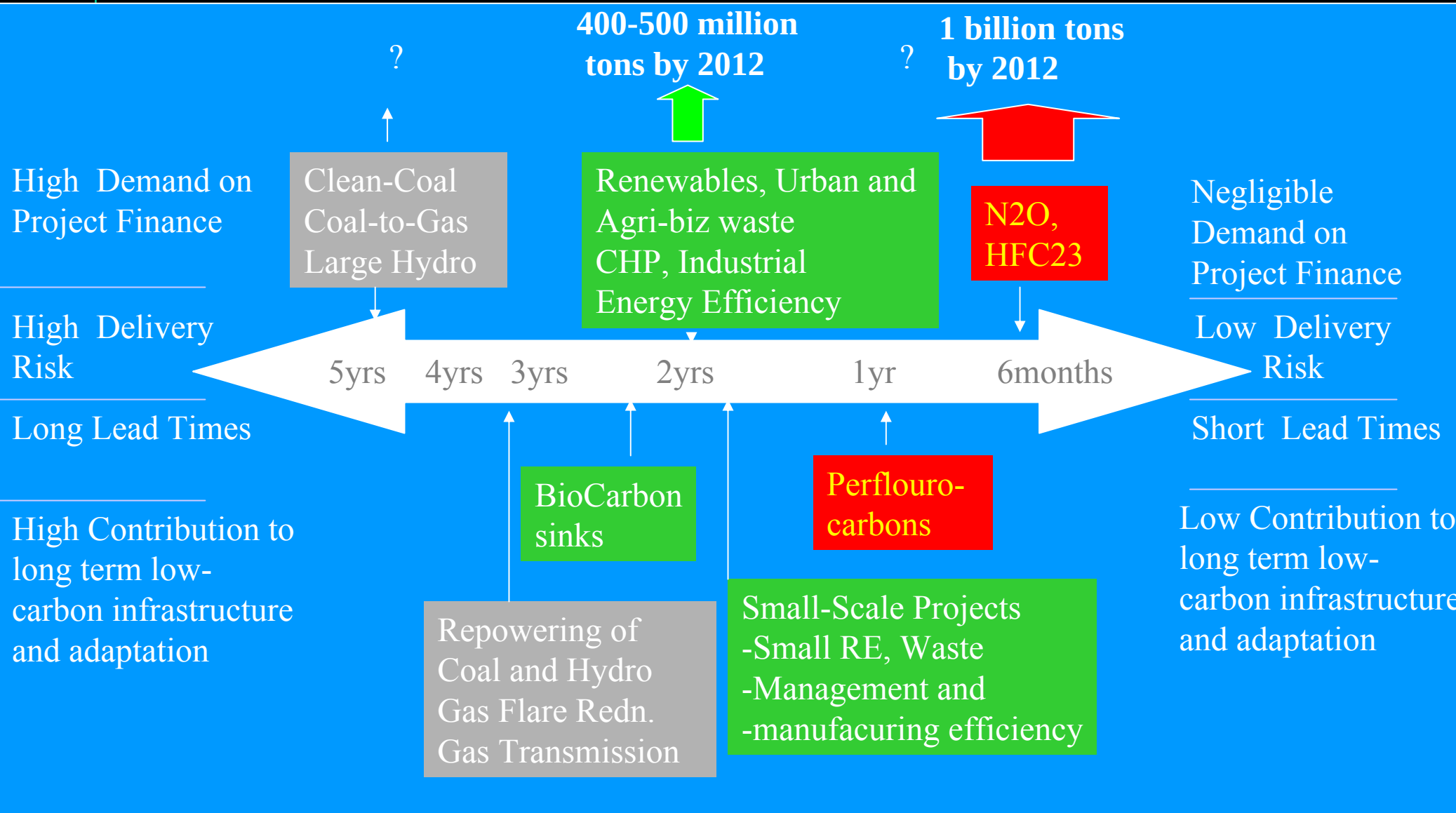
The CO2/CH4 segment – "development project" segment – of the CDM market cannot more than double for 2012 delivery i.e maximum potential is 500 million tons.

CDM market needs to deliver at least 1.5 billion tons

Lead Time on CO2/CH4 Segment of CDM Market



Additional one billion CDM Tons can come from HFC23, N2O, PF6 – but does not leverage investment in sustainable development

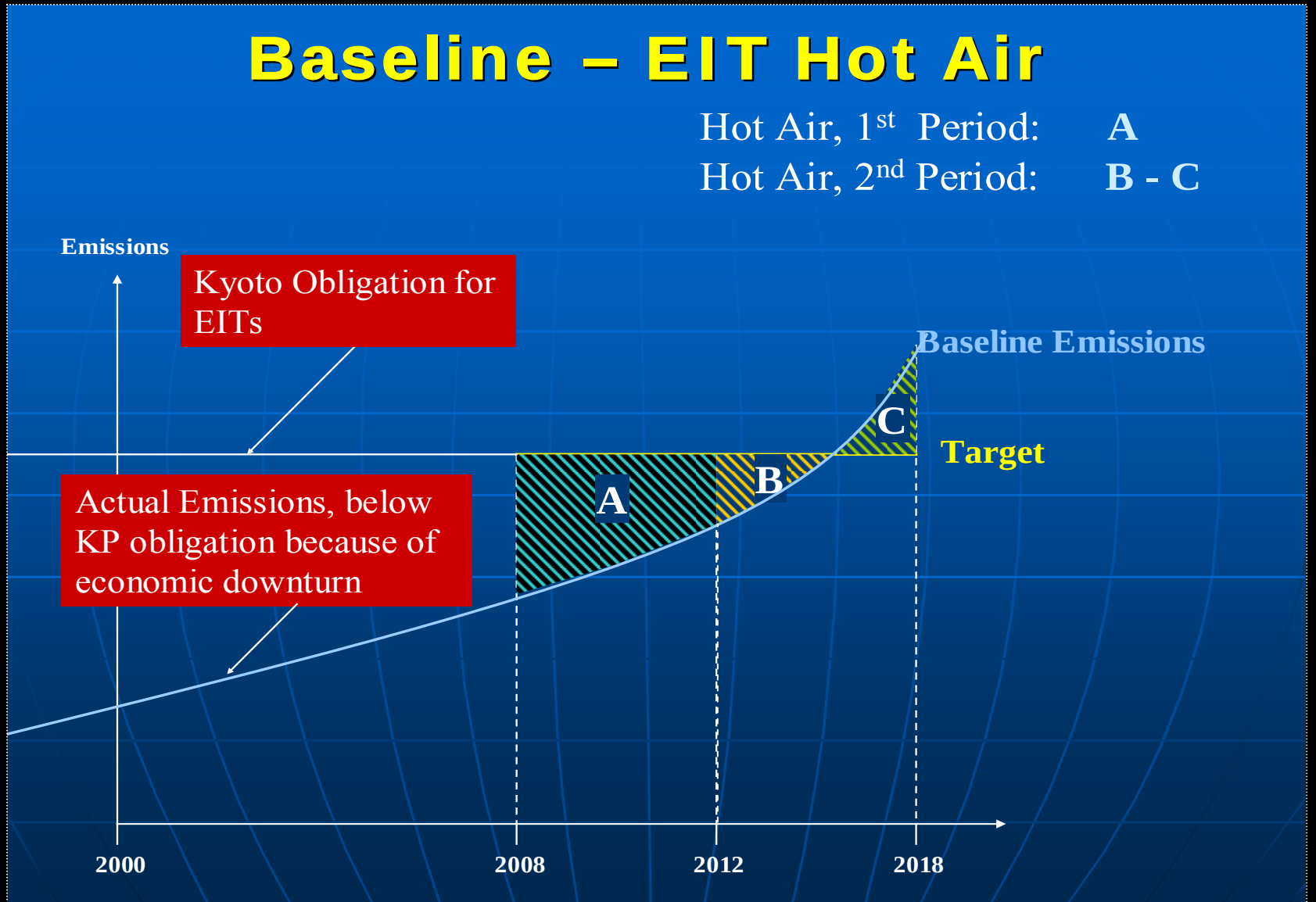


Sources of Supply to fill the Compliance Gap - AAUs

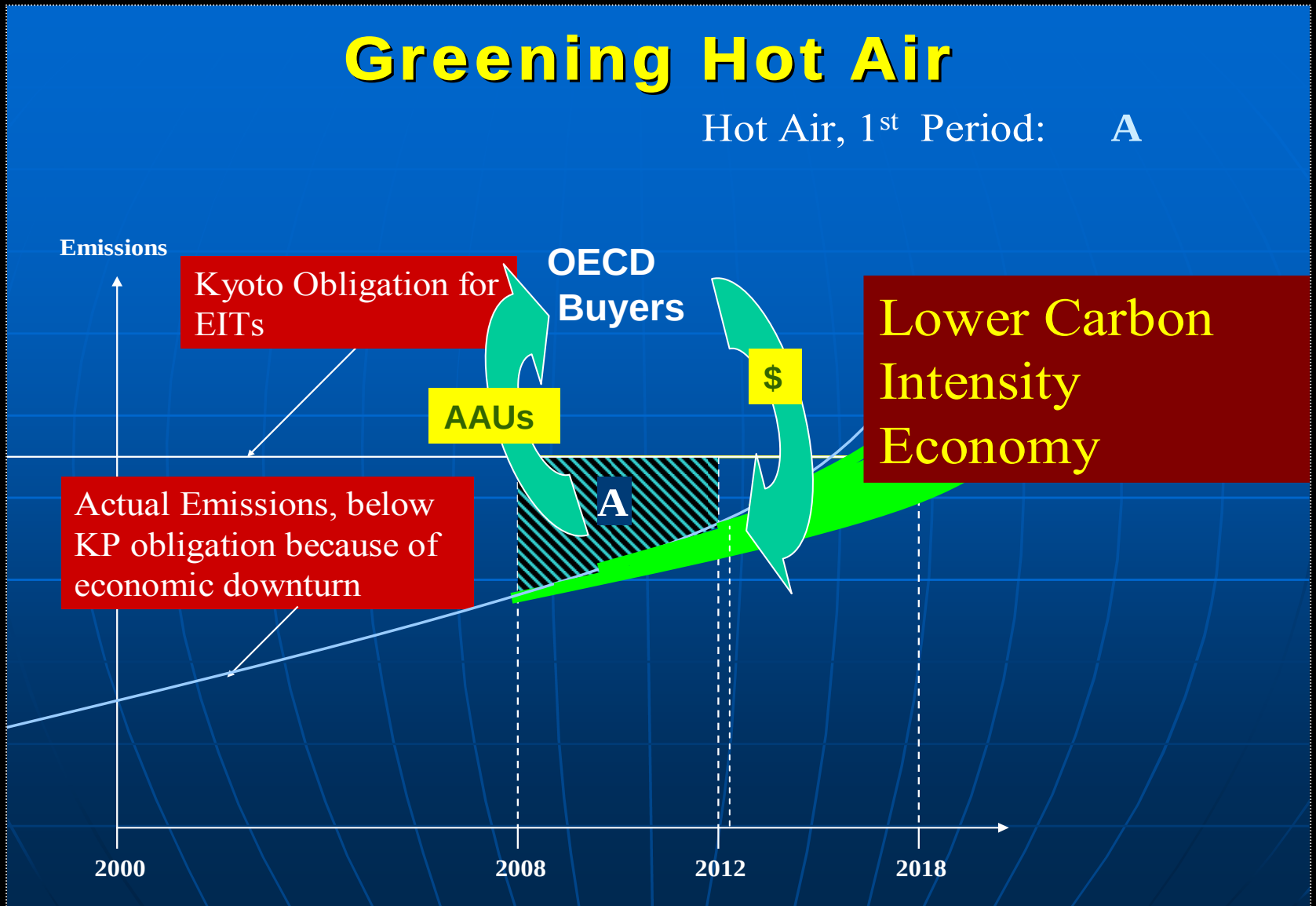
- Assigned Amount Units (AAUs) - Greened AAUs and Green Investment Schemes

- Emissions trading with EITs (Assigned Amount Units) has to be at least 2 billion tons (the EITs have the potential to trade about 7 billion tons because their emissions are significantly below their allocation under the KP due to the economic downturn)
  - "Greening" the AAUs to OECD Sovereign buyers will be essential - implies about $30 billion of new investment over the next 4-5 years for every billion tons of AAUs traded
  - Absorption capacity for new investment may limit greening option to about 1 billion tons

Explaining the Tradable Surplus "headroom" of Transition Economies



Explaining the Greening of AAU's and Green Investment Shemes for Eastern Europe



Project-based vs Sectoral Mechanisms in the post-2012 era

- Both will be required
  - Sectoral approaches for larger energy using economies - the only means of generating the resource and technology flows on the needed scale
  - Project-based approaches - for smaller less industrialized countries, or for low volume sectors not amenable to sectoral approaches
- Neither the sectoral nor project-based approaches of the future has yet been demonstrated!
- This the opportunity for Technology Additionality and CDM Reform

The concept of technology additionality

Additionality:

"A CDM project is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity" (Marrakech Accords, 17/CP.7, Art. 43)

→ in order to know if a CDM project is additional you have to find out what the baseline is

→ additionality can only be predefined for a whole technology (and for all projects using it) if the baseline for this technology set is also predefined

Predefined baselines

(1) only if we can use a predefined baseline the concept of technology additionality can we seriously reduce transactions costs

(2) approved small scale CDM-methodologies already uses predefined baselines (e.g. default value for CO2-emission coefficient of diesel generators in the case of small power generation projects)

(3) Approach 48c (benchmark) for choosing a baseline methodology can provide baseline standardization for regular sized CDM project activities (Marrakech Accords, 17/CP.7, Art. 48c)

Definition of technology

- 48(c) approach: "The average emissions of similar project activities undertaken in the previous five years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category."

  (so far no approved CDM methodology using 48c)
- Flexible interpretation of 48 (c) provides an opportunity for radical reduction in CDM transaction costs and the needed regulatory certainty for developers and financiers
- Parties could approve in December a positive list of "additional" technologies up to an initial penetration rate.

CDM Reform for What?

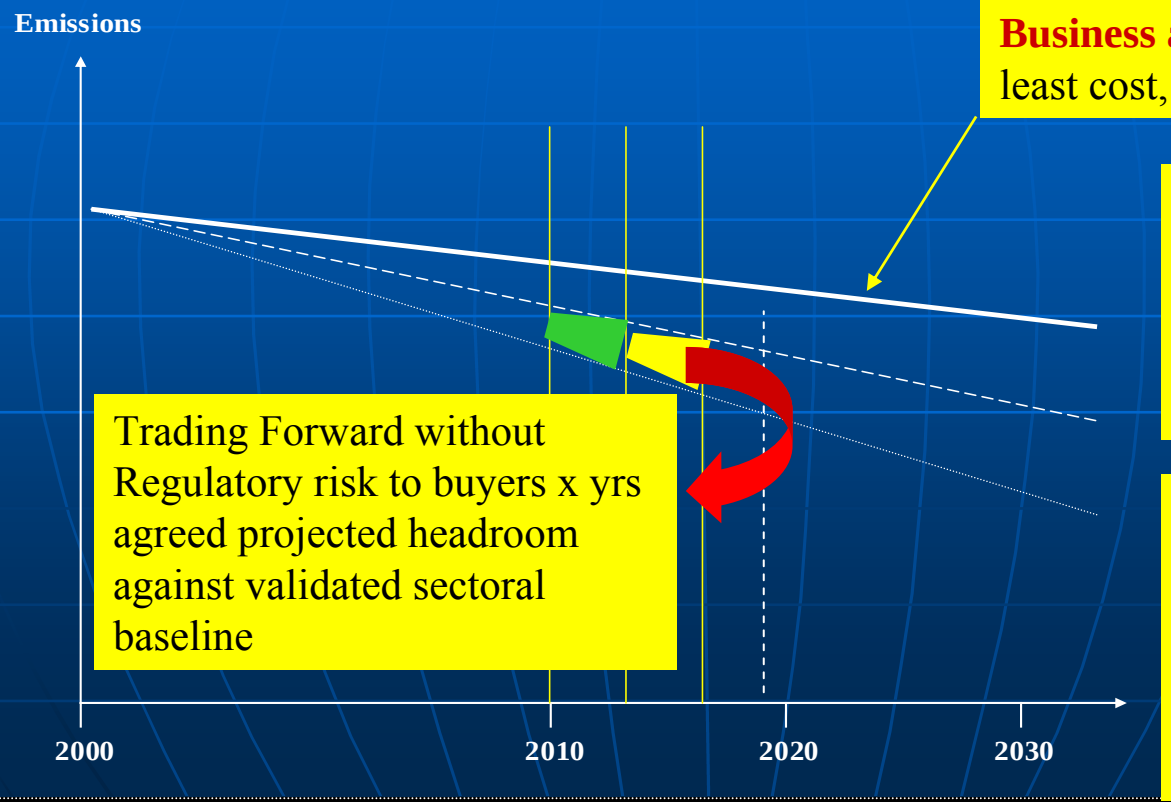
- To avoid a collapse in the CO2/CH4 segment of the carbon market (and continued stagnation in investment in climate resilient development) we need:
  - Immediately implemented CDM Reform embracing capacity enhancement, process streamlining and technology additionality agreed in CoP/MoP
  - A CDM Market Continuity Facility to buy post-2012 vintage CERs to ensure 10-year carbon purchase contracts from credible development projects, and a
  - OECD Commitment to grandfather CDM assets registered by 2012 into the post-2012 era

Financing Challenge of Low Carbon Systems for Climate Change Management

- Assumption: carbon trade driven by effective OECD domestic emissions reductions regimes with long term horizons is the only credible source of capital to meet incremental cost and risk of climate-friendly and climate resilient development
- Energy Investment Scenarios:
  - IEA - $16 trillion through 2040 in baseline + $2 trillion for low carbon options (or $50/tCO2e)
  - No offsetting revenue streams to support most efficient locally and globally friendly technologies
  - Half OECD Power fleet to be replaced in next 15-20 years
  - In next 20 years China and India will move from 10-15% of global installed coal power to 40+%
  - Efficient coal use and carbon capture and storage dominate needs

Voluntary Sectoral Approaches are Compatible with Investment Needs

Sector-based Carbon Asset Creation and Trading Concept



Business as usual – financial least cost, market failures

Credible Baseline: reflecting economically least cost domestically - independently validated against policies and measures

Trading Forward without Regulatory risk to buyers x yrs agreed projected headroom against validated sectoral baseline

Low Carbon Path - reflecting economically least cost with incremental financing to reduce global externality - independently validated against policies and measures