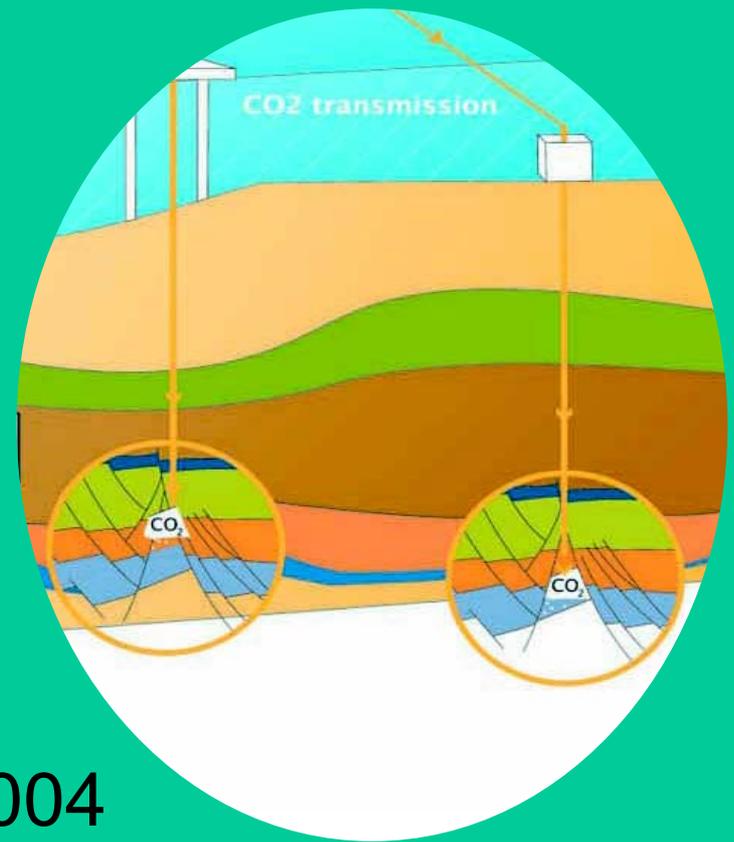
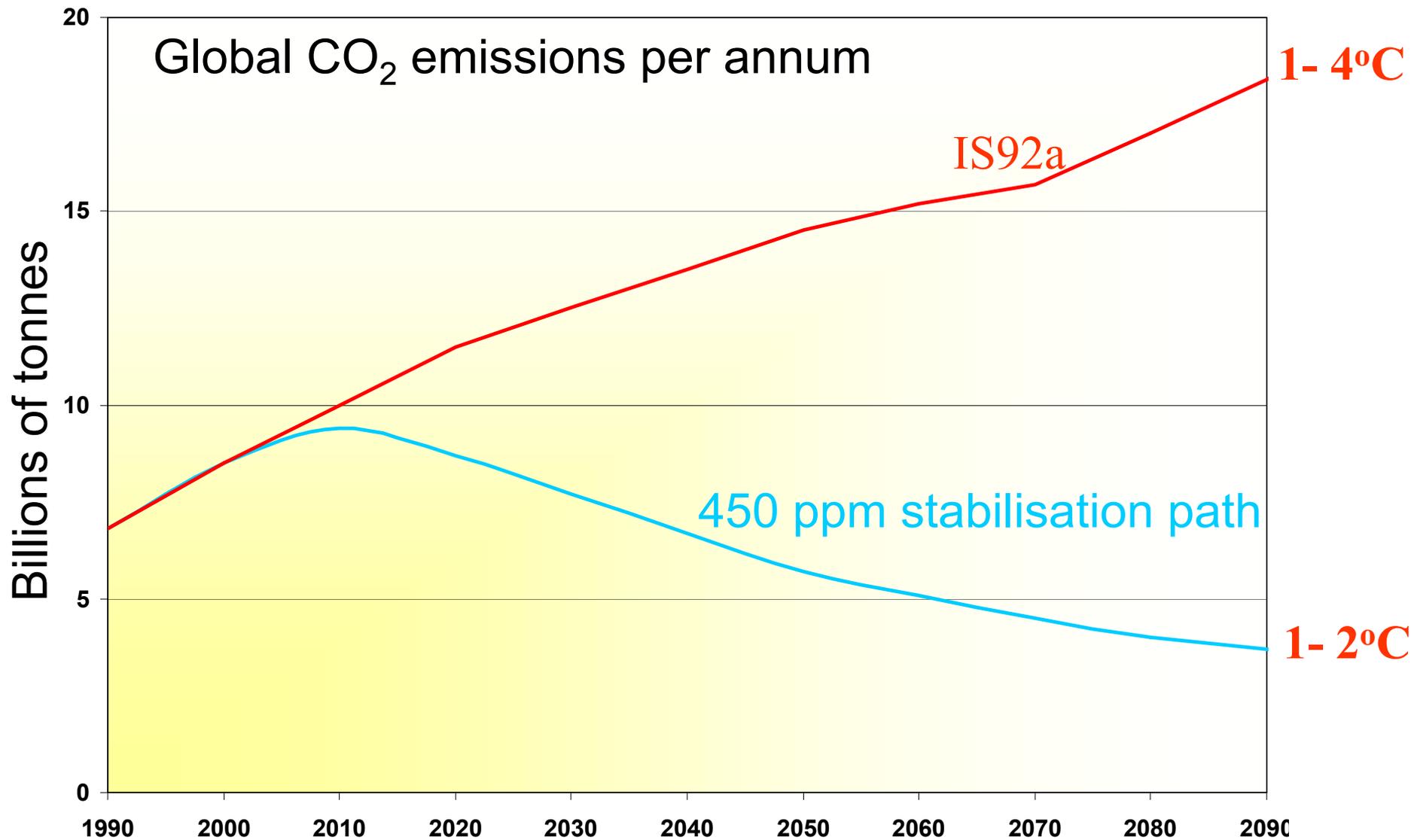


Encouraging Early Geosequestration

Carbon Sequestration
Leadership Forum

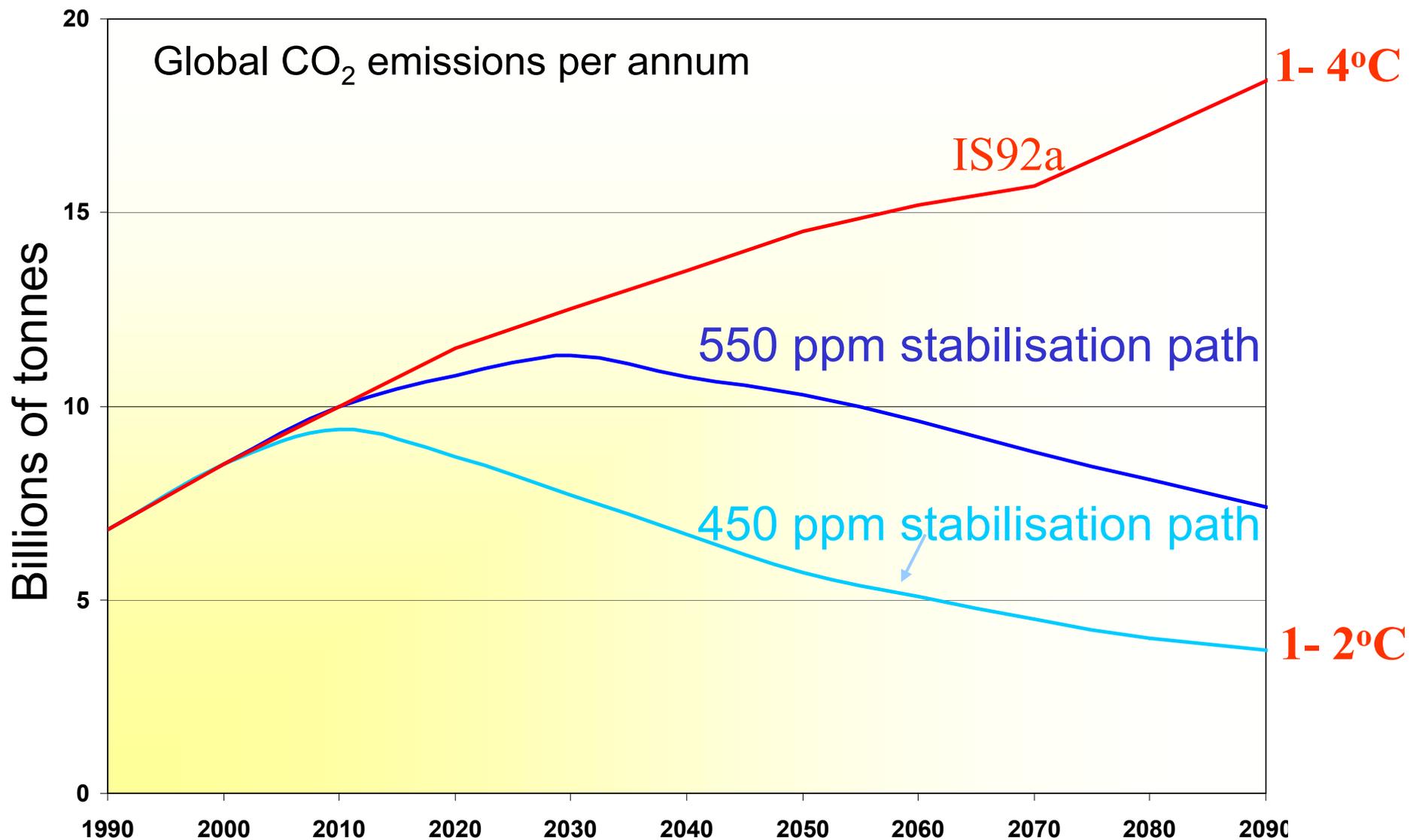
Richard Aldous Melbourne 2004





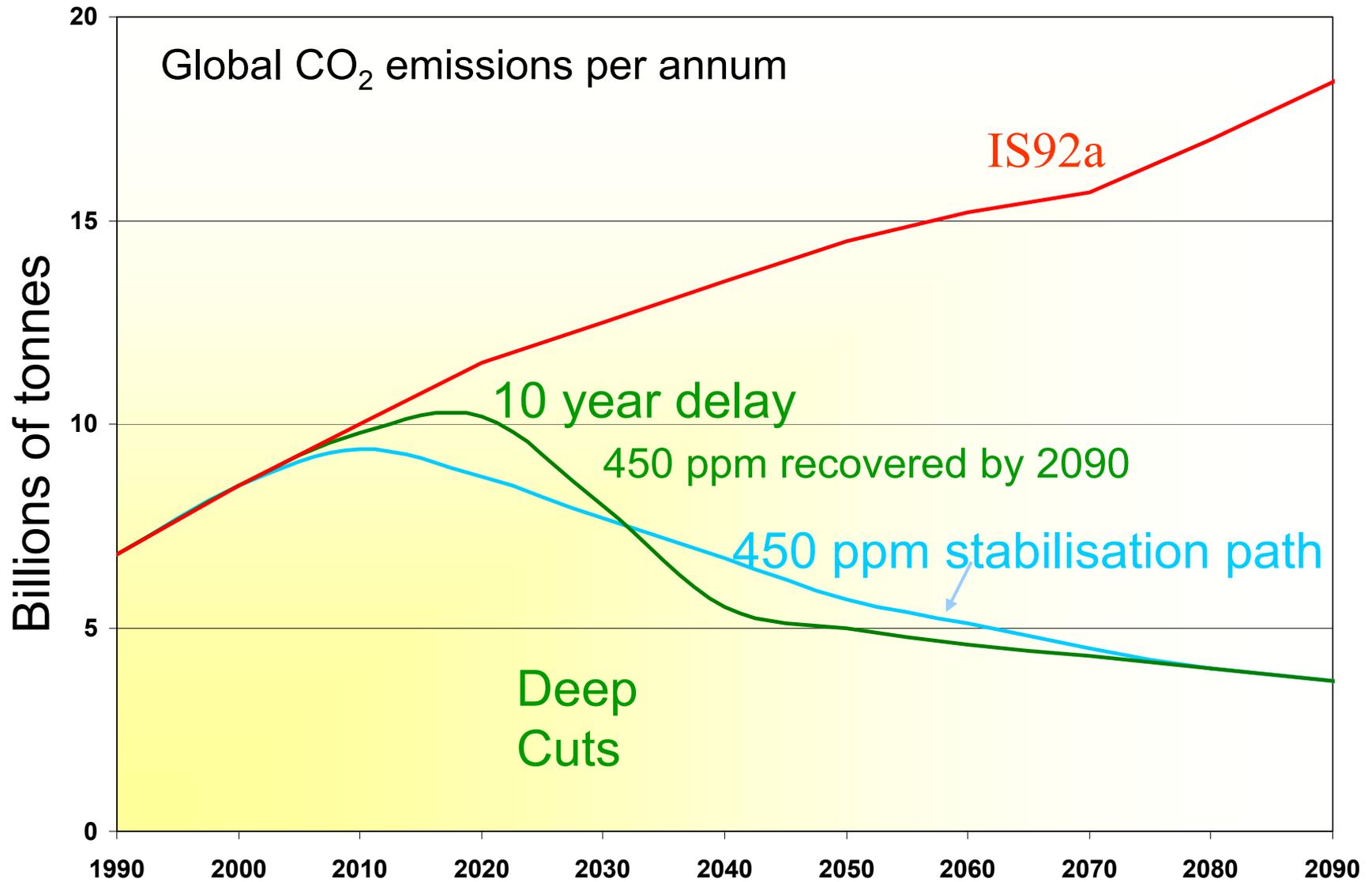
IPCC projections

Delays increase CO₂ stabilisation levels



IPCC projections

Delay makes 450 ppm harder to achieve



Prepared from IPCC projections

We need to move quickly:

Delay increases

- Eventual global CO₂ stabilization level
- global warming
- Every tonne of CO₂ does \$150- 400 ?? damage
- As CO₂ level increases damage costs /t increases

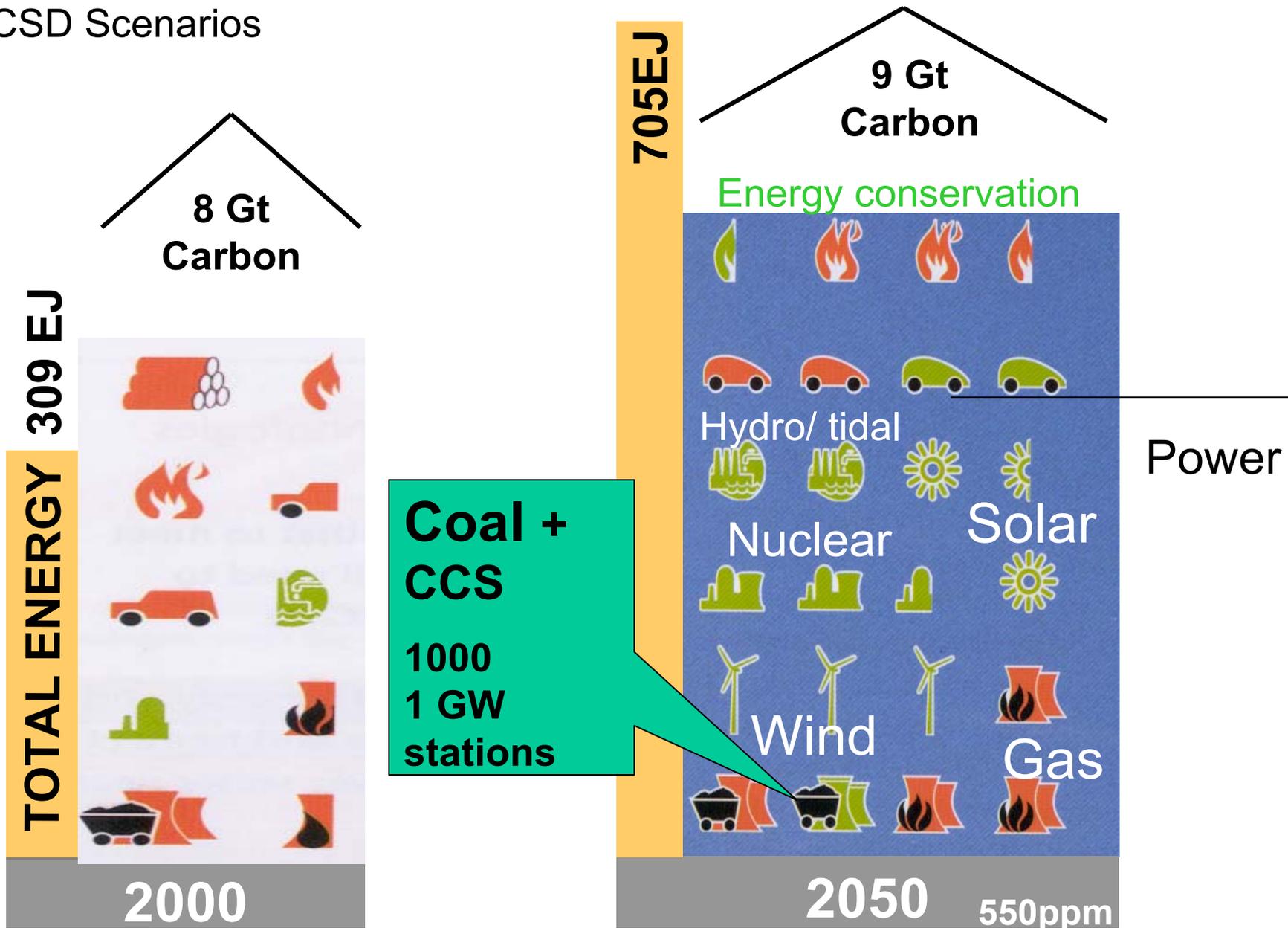
Geosequestration

offers one of the major potential mitigation measures

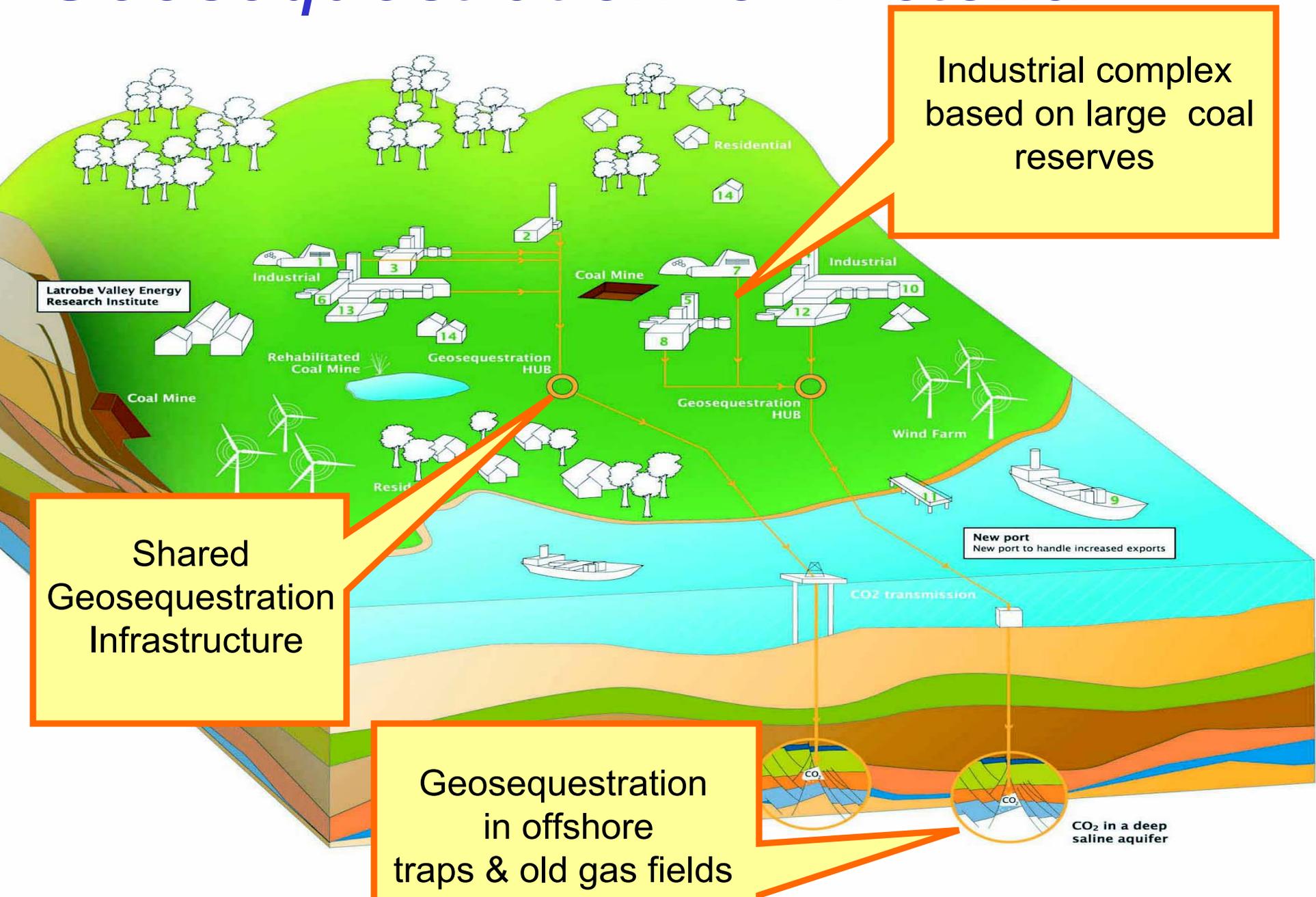
Geosequestration is needed soon as possible

A variety of technologies are required:

WBCSD Scenarios



Geosequestration for Victoria



Industrial complex based on large coal reserves

Shared Geosequestration Infrastructure

Geosequestration in offshore traps & old gas fields

CO₂ in a deep saline aquifer

Wanting to build today in Victoria:

Coal to gas to liquids with geosequestration

- Large capital expenditure
- Engineering and construction risks
- New technology / technology risk
- Regulatory uncertainty
- Long liability uncertainty
- Community uncertainty

How to get finance ??????

How to get approvals?????

Getting more geosequestration projects

- Encourage technology
 - \$ by industry & governments
- Put a price on carbon
 - to make it viable

α

$\alpha\sigma$

Getting more geosequestration projects

- Encourage technology α
 - \$ by industry & governments
- Put a price on carbon $\alpha\sigma$
 - to make it viable
- **Tax breaks & incentives** σ
 - on CCS capital infrastructure
- **Regulatory regime** Λ
 - available, easy to use and viable

Getting more geosequestration projects

- Encourage technology
 - \$ by industry & governments
- Put a price on carbon
 - to make it viable
- Tax breaks & incentives
 - on CCS capital infrastructure
- Regulatory regime
 - available, easy to use and viable
- **Community acceptance**
- **20 year Amnesty**
 - on long term liability

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20 year Amnesty on long term liability

- Any projects started **before 2025** will not be subject to long term liability
- Any leakage after closure and 10 -15? years of monitoring – no liability
- No liability to company
- No liability to government for long term leakage
- ie global atmosphere takes the risk on early projects

*Remember: if no geosequestration
the CO₂ goes into the atmosphere anyway*

Amnesty Benefits

- First generation commercial projects to get started
- Technology refined, applied and costs reduced faster
- **More CO₂ out of the atmosphere**
- Community, scientists & governments become more familiar with major industrial use of CCS
- Avoiding delays whilst we try to resolve the long term liability issues- liability will be required once the technology becomes main stream

Risks

- Minor leakage from a few traps (statistically will be insignificant and spread over a geological timescale)

Summary

We need to move more quickly:

CSLF is:

- moving the technology forward
- moving the regulatory framework forward
- encouraging community engagement and acceptance

CSLF may like to consider:

- agreement to encourage other policy measures to facilitate the early uptake of geosequestration

Encouraging Early Geosequestration

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