



Climate Risk

Towards a High-Bandwidth, Low-Carbon Future

Telecommunications-based Opportunities to
Reduce Greenhouse Gas Emissions

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ITU Symposium Kyoto, April 16 2008

Comments made in this presentation are those of Climate Risk P/L, no positions or opinions of other companies are implied.





High yield investment or stranded asset?

If you pride yourself on managing the financial risks to your investments, you need to understand how climate change impacts your physical assets today and over typical financial terms.

At Climate Risk we provide location-specific climate change impact projections that allow our clients to make informed investment decisions. We understand the science, so that you can understand the risks.



Climate Risk

Based in Sydney, Brisbane and London, Climate Risk provide specialist climate risk management services to business, government and community.

Our mission is to help clients build adaptive capacity, implement adaptation actions and secure commercial advantage.



Climate Change creates corporate risks

- **Direct Physical Risk**

- Impacts and perception risk to assets and investments, insurance cover + depreciation risks, Business Continuity Management systems, operations and human capital

- **Carbon Risk**

- Exposure to regulatory and market changes, offset integrity and market dynamics

- **Regulatory Risk**

- Compliance with an evolving regulatory environment such as planning codes, regulated industry standards and corporate governance issues i.e. CLERP 9, Corporations Act risk disclosure compliance. Emissions liabilities as well as impacts or adaptation regulation.

- **Market and Competitiveness Risk**

- Including changing markets, loss of productivity with respect to competitors and the effects of the changing relative value of assets based on exposure to primary (direct) and secondary (market adaptation) climate change impacts.

- **Litigation Risk**

- Including the liabilities associated with inadequate disclosure to trading partners/investors of associated climate change risks or inadequate preparation of a traded commodity for climate change. Multi-decadal assets such as property and infrastructure, superannuation .

- **Reputation Risk**

- Including the market perception of a failure to act or adapt to climate change impacts and expected regulatory evolution.

- **Emergent Risk**

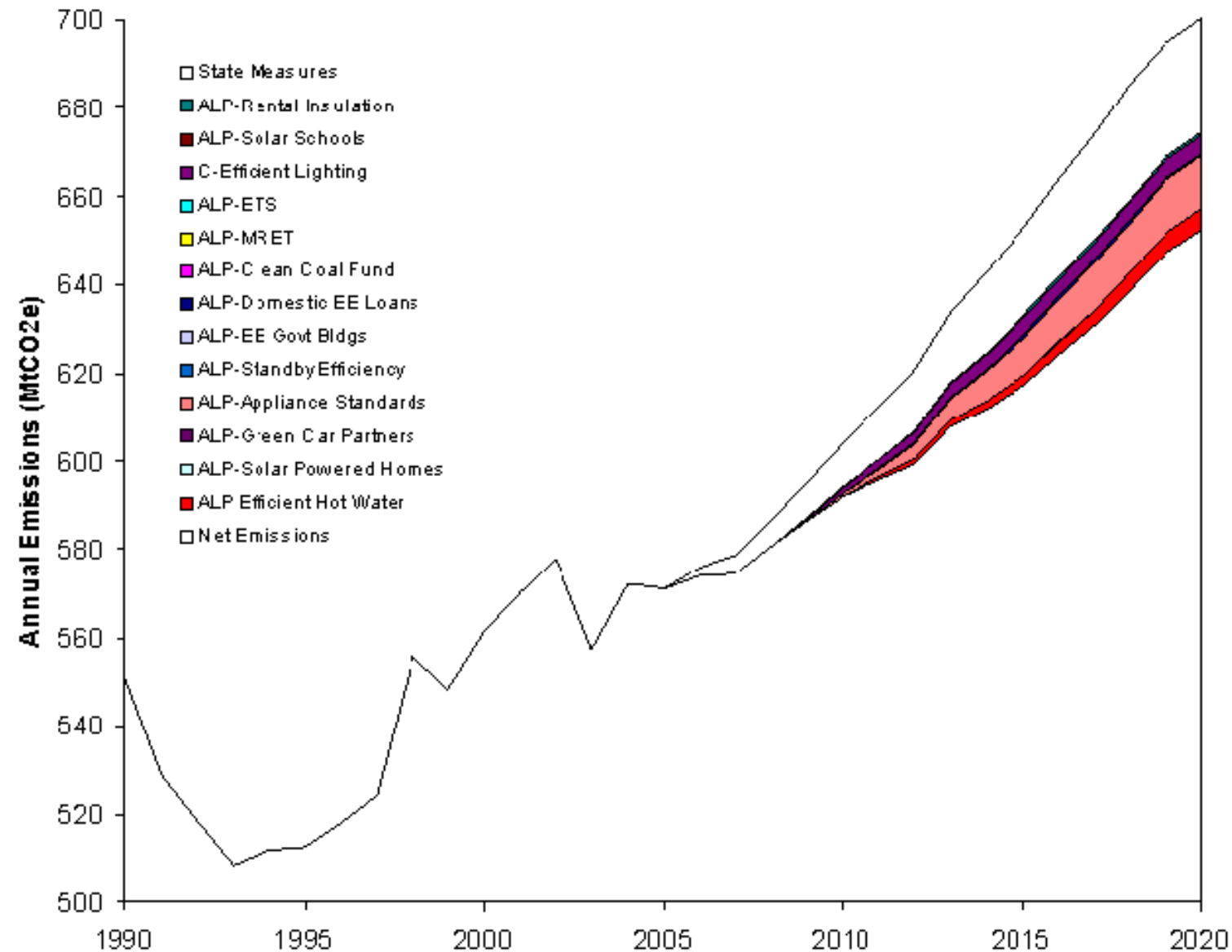
- new and future risks i.e. cocktail effects, compounding and unknown

The Climate Risk Report, “Towards a High-Bandwidth Low-Carbon Future” was commissioned by Telstra.

It differs from almost all other analysis in this field because its *outward looking*.

i.e. How do we address the national emissions challenge, rather than just put Telstra’s own house in order?

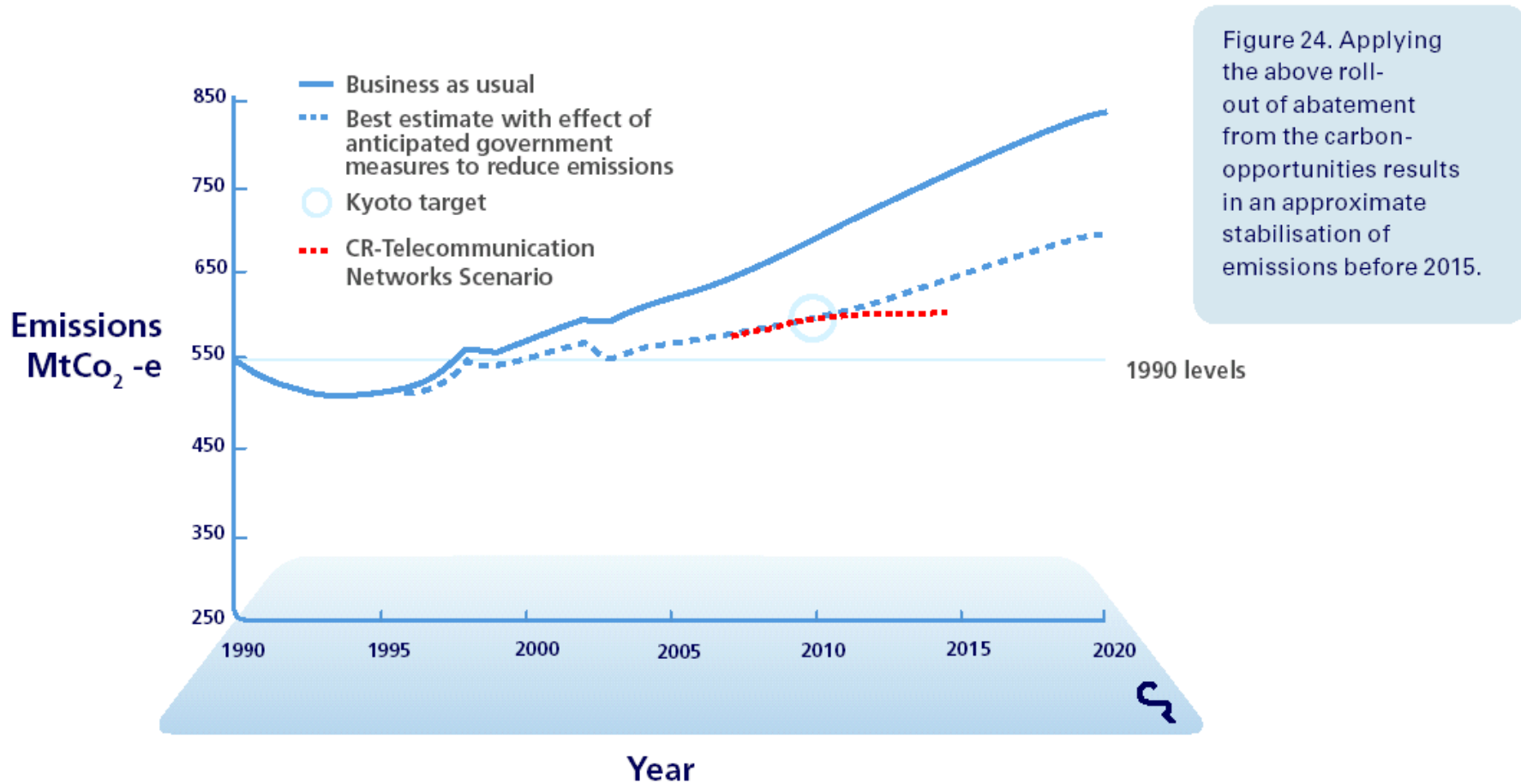




Australia's emission profile based on existing policy suite

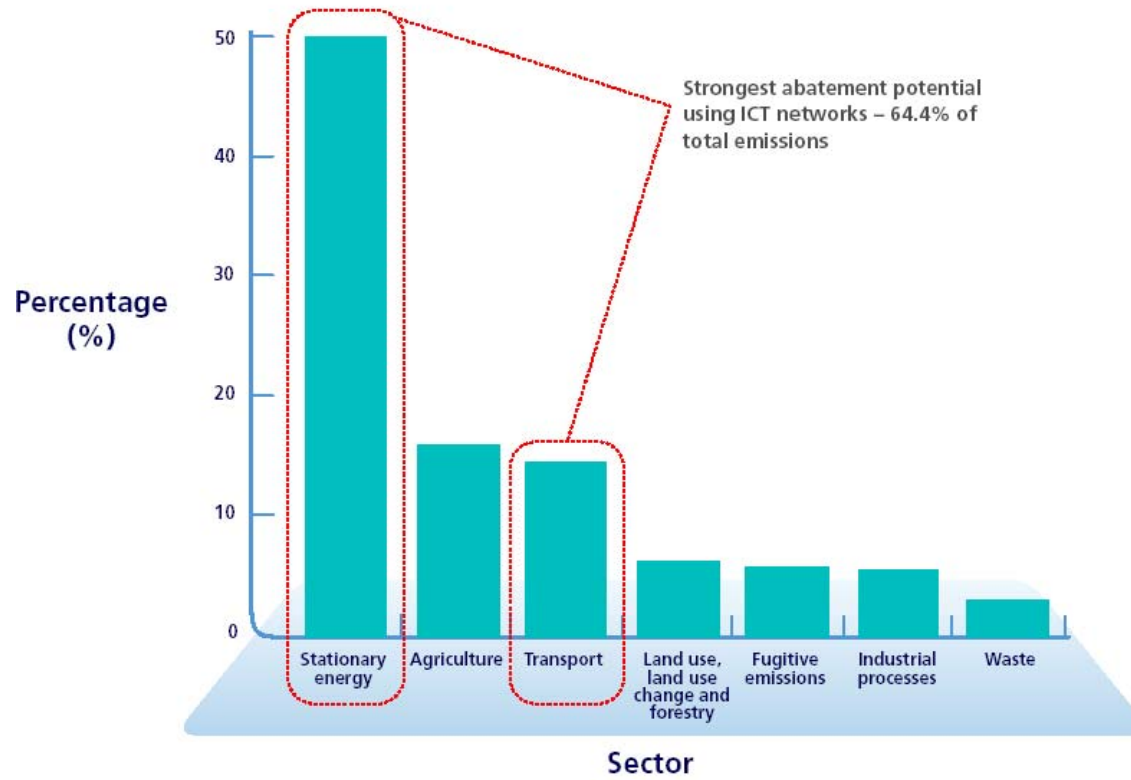
The UK's Financial Times described drawing a link between emissions abatement and Australia's overall emissions trajectory as "audacious"...

Figure 24: Possible effect of Carbon-Opportunities on national emissions



BRW (Feb 21-27 2008) Australia's leading business magazine in a review of the report, branded the analysis "a network solution looking for a problem."

And they were completely correct!



The Problem: 90% of Australia's electricity comes from fossil fuels.

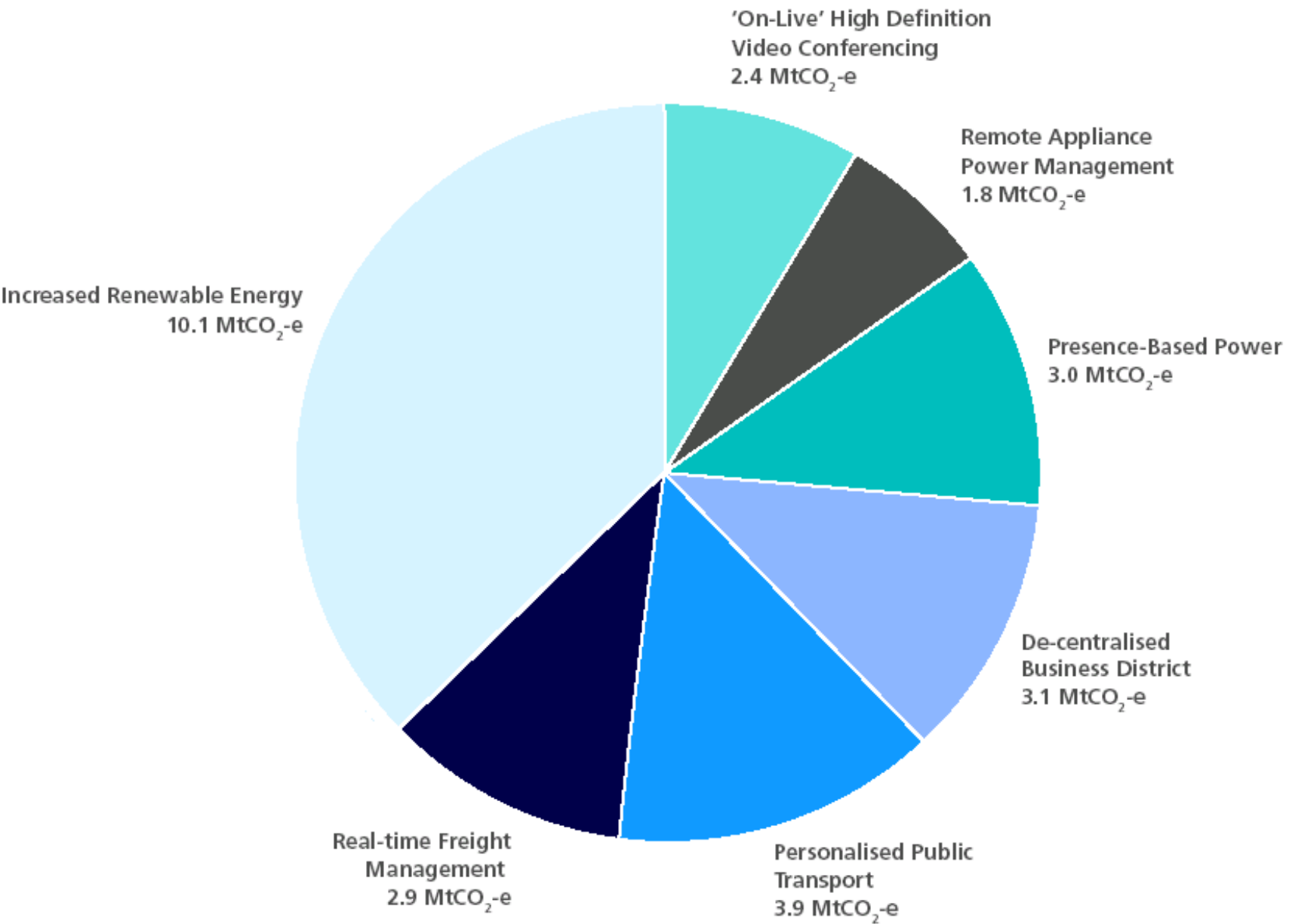
The Problem: About 10% of house and office electricity is wasted by devices on standby.

The Problem: About 15% of house and office electricity is wasted by appliances on but not being used.

The Problem: 75% of Australians drive to work representing 8% of national emissions and growing.

The Problem: About 1/3 of all freight kilometers are empty.

The Problem: About half of air travel is for business and a growing source of emissions.





On the Run.

This man is one of his company's most valuable (and expensive) assets. He has just spent 18 hours in transit on a plane that put out more CO₂ than the total annual emissions of Tonga. He has had very little sleep, and has had to miss another of his daughter's netball games. Amazingly, he is about to try to pitch to a prospective client at a meeting for which he is now running late.



On the Ball.

This man is also one of his company's most valuable assets, so valuable that they prefer not to waste his time in airport lounges. This morning, he has booked a Telstra 'In Person' suite in New York for his client's team. He is calm and relaxed and about to make his pitch. This afternoon he will make the same pitch to clients in Japan and then the United Kingdom. And he'll still be home in time to pick up his son from soccer training.



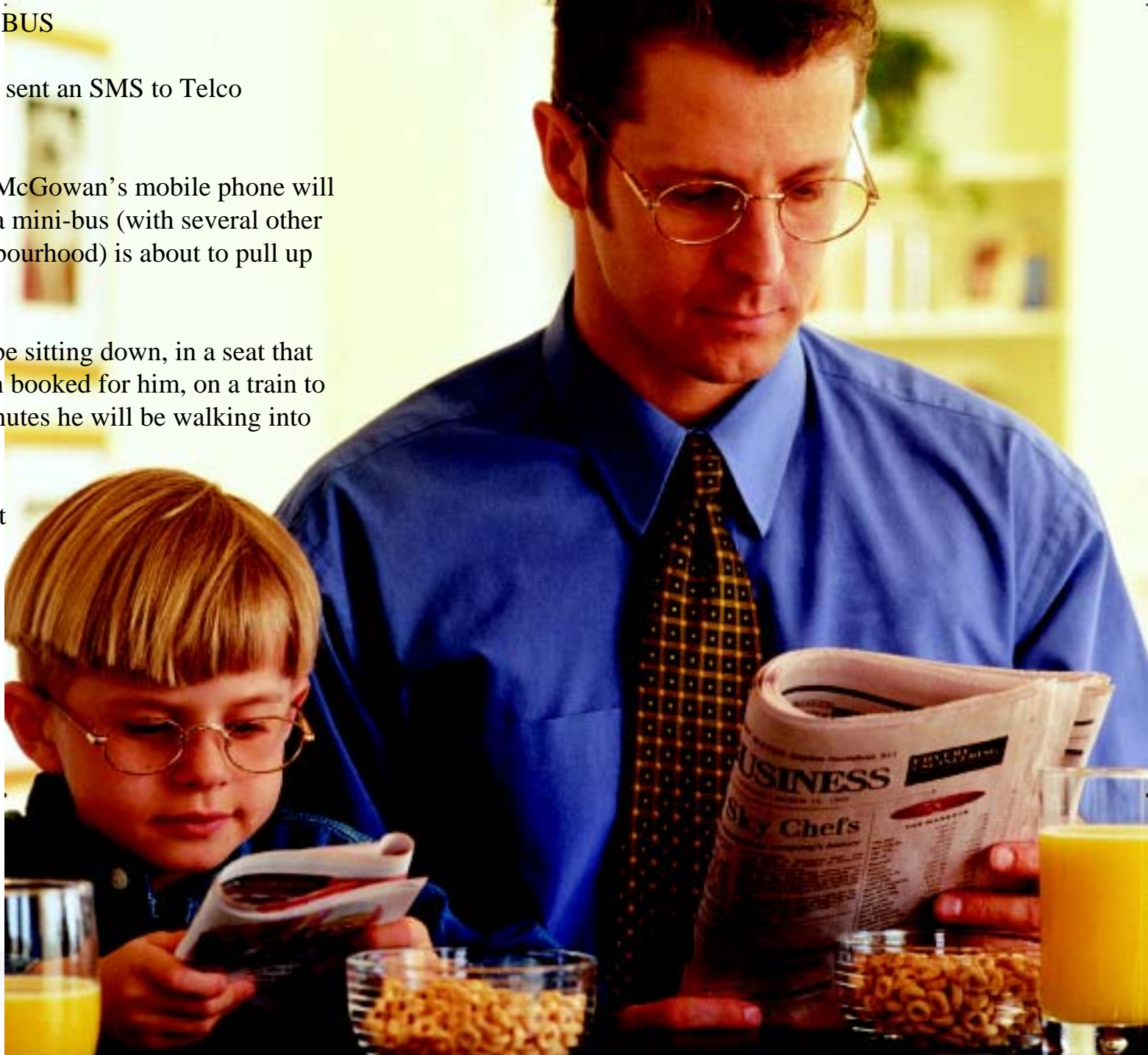
RUSHING FOR THE BUS

Mr McGowan has just sent an SMS to Telco Transport.

In 9 minutes time Mr McGowan's mobile phone will bleep telling him that a mini-bus (with several other people from the neighbourhood) is about to pull up outside his front door.

In 17 minutes he will be sitting down, in a seat that has automatically been booked for him, on a train to the city. And in 37 minutes he will be walking into work.

So easy you will forget you have a car.



Increased Renewable Energy

The Problem: Renewable energy is growing quickly but output 'fluctuations' can constrain grid management.



Increased Renewable Energy

The Problem: Renewable energy is growing quickly but can be fluctuations can constrain grid management.

Opportunity: Use networks to link energy appliances in homes and office to balance renewable energy production in real time.

Significance: 10.1 million tonnes CO₂/ year, worth \$86m in energy and \$100-300 carbon

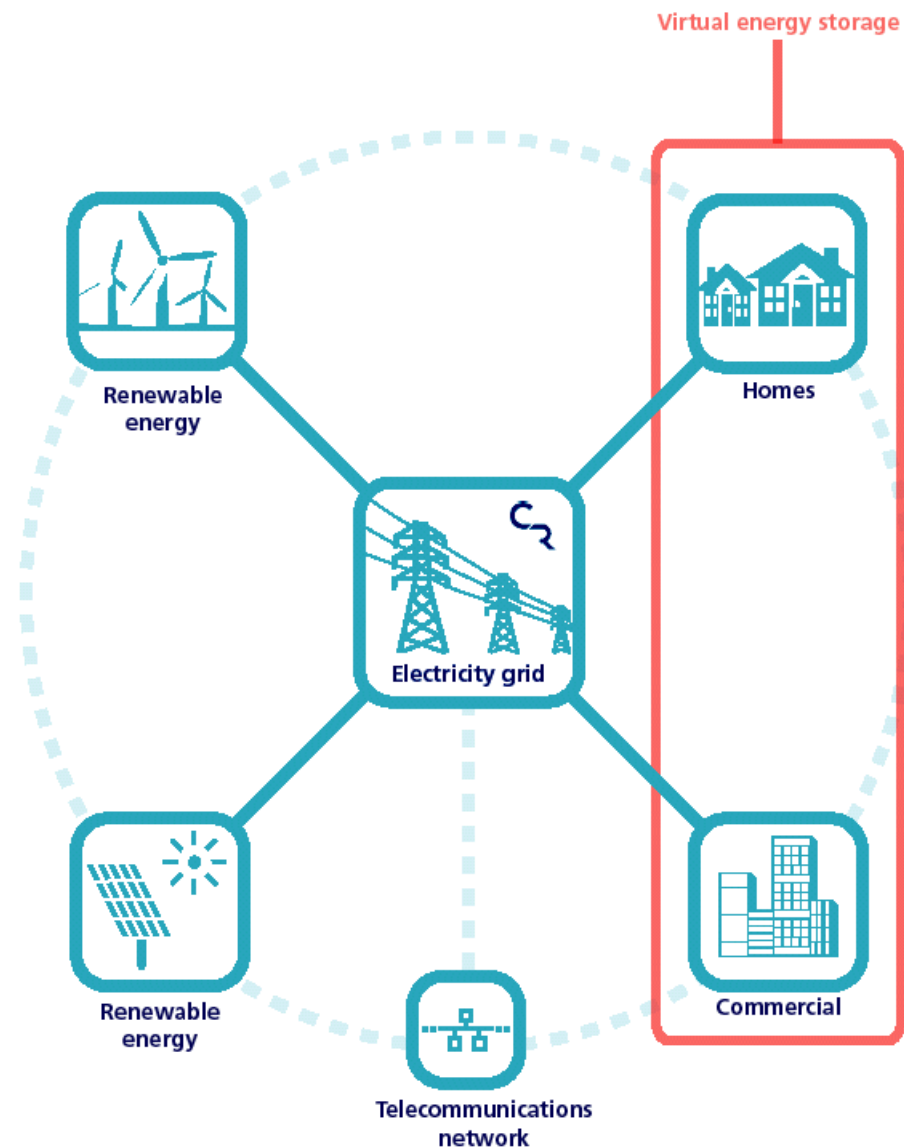


Figure 22: Aggregated value for each of the Carbon-Opportunities

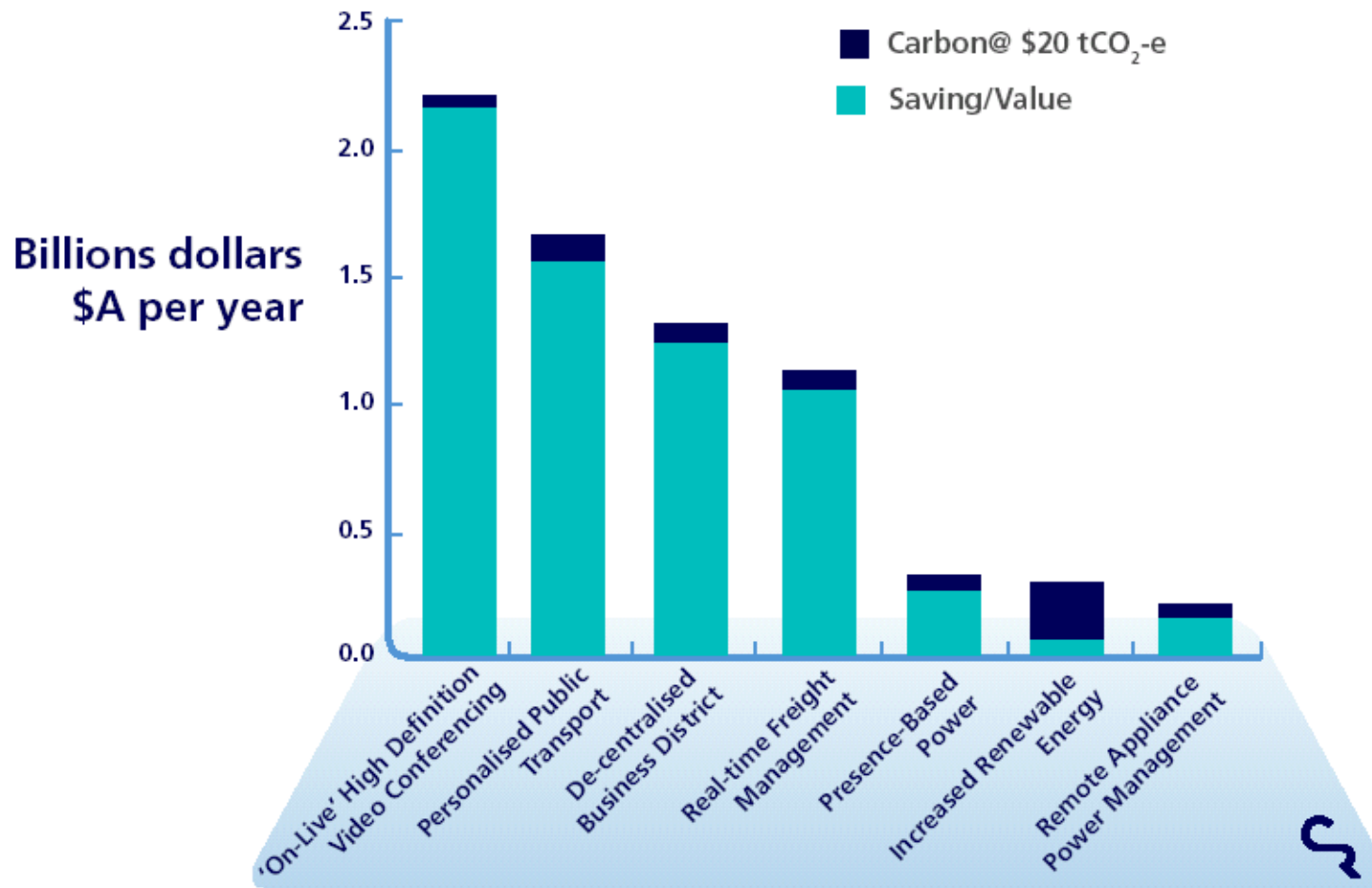


Figure 24: Possible effect of Carbon-Opportunities on national emissions

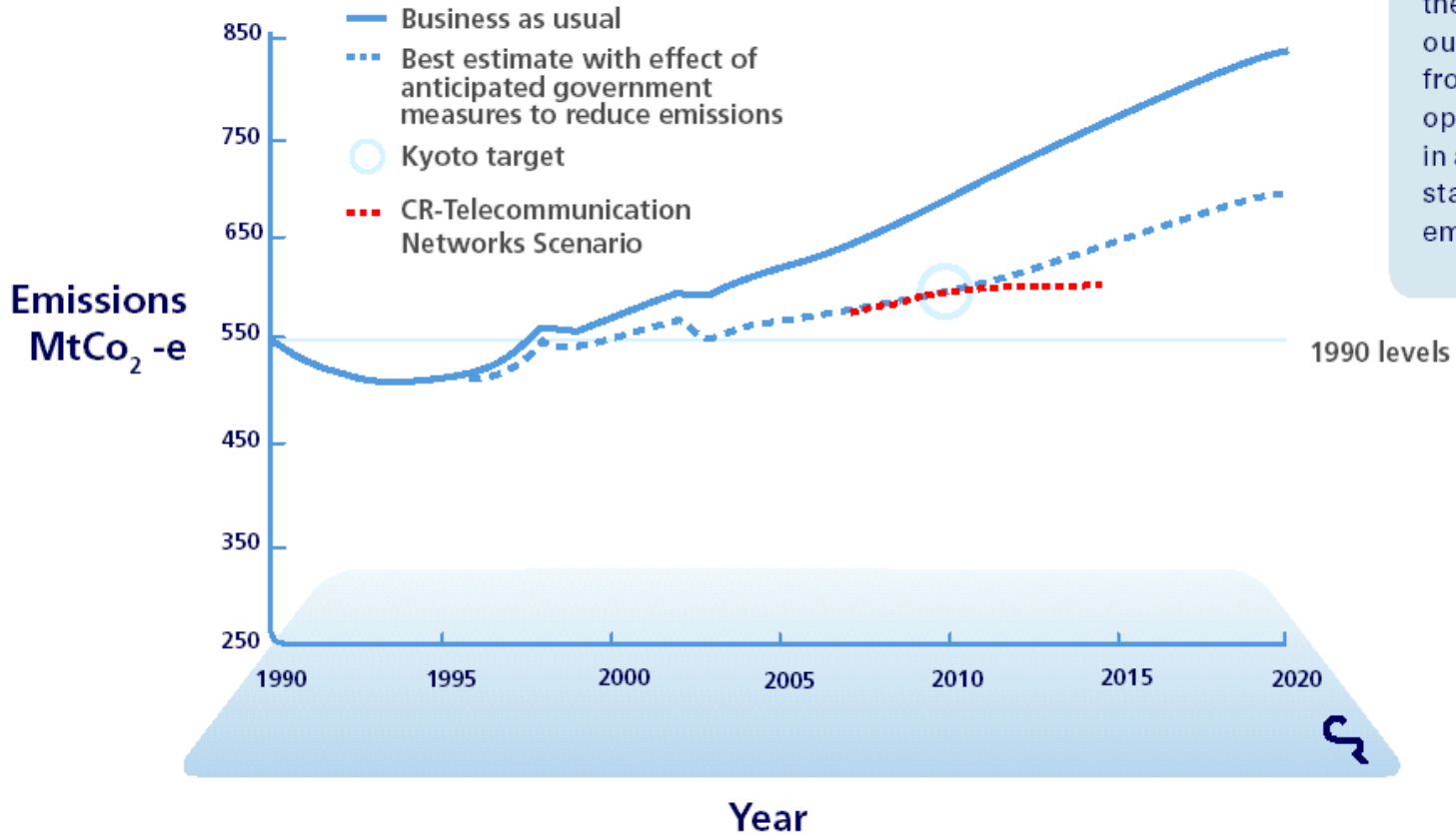


Figure 24. Applying the above roll-out of abatement from the carbon-opportunities results in an approximate stabilisation of emissions before 2015.

Take-homes from the Study:

ICT can be a major player in Carbon, but you need a seat at the table.

ICT is often providing 'disruptive' solutions in other sectors, so open your mind.

The impact could be much bigger. Regulation would deliver 2 to 4 times the reductions



Climate Risk

The climate is changing, are you?



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