



Climate Risk Pty Ltd Strategic Carbon Capability Statement

"The climate is changing. Are you?"



...we commissioned research by consultants Climate Risk outlining opportunities to dramatically reduce our energy consumption using the scale and scope of Telstra's Next Generation Networks. The report puts actual numbers around the carbon abatement opportunities and it's pretty exciting.

- Sol Trujillo,
CEO Telstra, Australia
Davos Connection
May 2007



Greenhouse Emissions Analysis and Industry Impact Forecasting

From global emissions cuts to specific climate impacts on business, the CRISTAL Model is able to give long-range forecasts based on various policy settings combined with real world industry growth capabilities. The flexibility of the CRISTAL model to a variety of customized scenarios makes it adaptable to the specific needs of government, business and industry. CRISTAL provides companies that are concerned about the long-range impacts of climate change regulation with an insight into the effects in their sector.

The CRISTAL Model

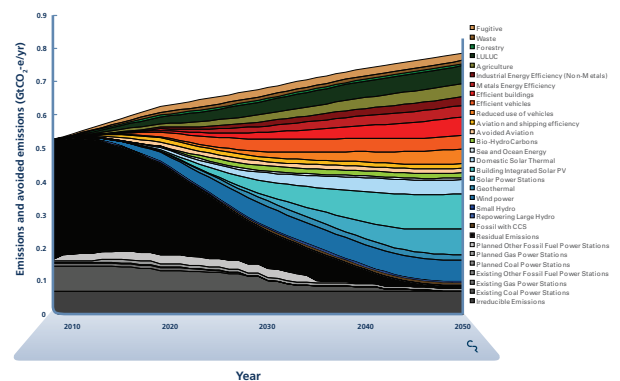
Overview – The Climate Risk Industrial Strategic Technology Allocation Model (CRISTAL) is a private sector analysis tool to quantify the effect of long-term emission abatement strategies.

The CRISTAL Model is based on a Monte Carlo simulation platform in which the results are presented as probability distributions that reflect the range and certainty of the input data and provide an insight into the range and likelihood of outcomes.

The CRISTAL Model is customised to the needs of individual clients and provides emission, energy and industry growth projections to 2050 and beyond. To date, the CRISTAL Model has been applied globally, nationally and commercially to Murrumbidgee Irrigation and IMIS/Connell Wagner's Freight Movement Model.

Contraction and Convergence – The CRISTAL model goes beyond short term policy setting by basing the scenario generation in long term temperature stabilization goals, atmosphere loadings of greenhouse gasses (e.g. 450 part per million) and the consequences for global per capita and national emissions at any year from today to 2100.

Emissions and Energy – The CRISTAL model provides a synthesis of all emission abatement (see figure) and a detailed breakdown of the final energy make-up. The model is comprehensive in capturing and comparing all sectors including contributions from stationary energy, transport, agriculture, land use change and forestry, as well as fugitive and waste sectors.



Policy Assessment – The flexibility of the CRISTAL Model makes it possible to assess the impact of various government and regulatory policies such as emissions trading schemes, mandatory renewable energy targets and other more complex carbon pricing structures on any public or private sector business case.



“audacious”
– Financial Times, UK

Costs and Revenue – The CRISTAL Model also gives Climate Risk the ability to track the required investment and subsequent revenue stream for each low emission industry. This is a major advantage over models which per-set a carbon price. The CRISTAL model starts with intended emission outcomes, and then looks at the industrial changes and the consequent spending required over time. This allows a much deeper insight than a carbon price system.

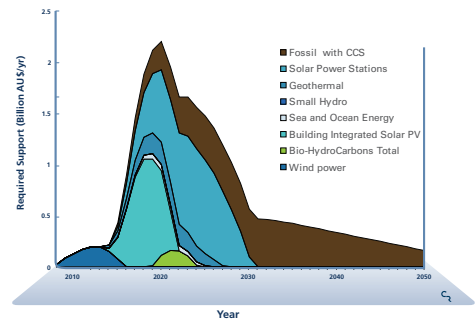
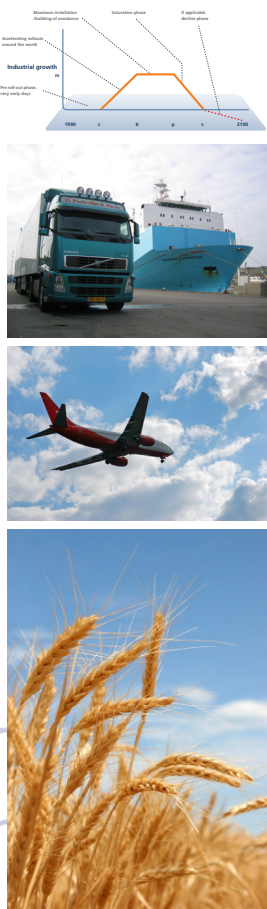
Add-Ons – For each commercial application, it is possible to install add-on applications to produce tailored commercial parameters.

Industrial Experience: The CRISTAL model is currently being used in private sector applications including major road infrastructure analysis and multi-commodity analysis of irrigation infrastructure. The system is also being used in conjunction with the IMIS/Connell Wagner’s Freight Movement Model.

Policy Applications: The CRISTAL model is available in both a national and international form and has been commissioned by the international environmental organisation WWF to assist with national and international policy analysis and development.

Recent Modeling Projects:

- Telstra – Towards and High Bandwidth Low Carbon Future
- Zurich – From Risk to Advantage: General Insurers as Key Agents for Climate Change Adaptation
- WWF – Industrial Constraints and Dislocations to Significant Emissions Reductions by 2050
- Murrumbidgee Irrigation – New Irrigation Paradigms in a Changing Climate
- Queensland Main Roads – A Dynamic Climate Change Risk and Opportunity Assessment



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