Carbon Offset Management Strategies and Best Practices
Forecasting, Selection, Optimisation

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Resource Intelligence is a professional consultancy delivering carbon measurement, reporting and industrial offsets project services. Carbon Intelligence is a verification service in markets which allow private verifiers.

Carbon Intelligence
Know the Facts
about your carbon position
about your regulatory position
about carbon trading.

Be Intelligent
in your response to the
challenges and opportunities
that carbon reporting and
emissions trading bring.
Resource Intelligence _ _ _ _ •
Carbon Intelligence _ _ _ _ •

Carbon Intelligence
了解
您碳方面的情况
您在法律规定方面的情况
碳交易方面的情况
在碳排放报告与碳排放交易规定带来的挑战与机会面前，我们帮助您
有智慧地应对
Presentation based on industrials

• Metals – CITIC Pacific, Glencore, Newcrest, Barrack, Gold Fields
• Oil & Gas – AGL, Air Liquide, Chevron, Exxon, Transocean
• Power – Stanwell
• Telecommunications – Telstra
• Nuclear – ANSTO, Beverley Uranium (General Atomics)
• Chemicals - BASF
• Coal and Steel – Anglo American. Caledon Coal (Guangdong Rising Assets Management), ICC
• Food – Wilmar, Penrice Soda (solvay)
• Transport – Boeing, Cobham Aviation, Queensland Rail
• Water – SA Water, SunWater
Upstream Offsets

• Resource Intelligence is the largest industrial offsets advisor and development partner in Australia (approximately 70% of national project volume).

• Carbon Intelligence is a verifier of land based offsets in Australia.
Offsets Management

Forecasting, Selection, Optimisation

Production plan → Tonne CO$_2$-e / tonne product → Decide number offsets needed → Which offsets acceptable? Lowest price? → Optimise offsets buy / sell

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Why the number of offsets needed is a probability curve

• Tonne CO2-e / tonne product is a U shaped curve.
• Plant management will reduce tonne CO2-e / tonne product once a price is established by changing air/fuel mix before combustion, reducing uncombusted venting of methane, etc.
• Reporting boundary – how aggressive was the Measurement and Reporting approach, how much risk of increase during Verification.
• Measurement Method (Tier) – reduce reported emissions by selecting a higher order method, for example using instrument analysis not assumed calorific values and emissions factors. May be voluntary or regulator imposed.
tonne CO2-e / tonne production

Marginal

Cumulative

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Reporting boundary example showing complexity
举例说明复杂性
Reporting boundary example showing complexity

Coal or Waste → Power Stations → Process Plant → Transfer to Port → Port → Ships

Crops
举例说明复杂性
Offsets Management

**Forecasting**, Selection, Optimisation

- **Reporting boundary (regulatory risk)**
- **Reporting Method (measurement cost, regulatory risk)**
- **Production plan**
- **Efficiency curve**
- **Tonne CO2-e / tonne product**
- **Forecast Optimisation**
- **Which offsets acceptable? Lowest price? Best marketing?**
- **Optimise offsets buy /sell**

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Why do some industrial emitters not buy the lowest cost units?

• Buy local generated offsets
  • A large coal fired electricity generator buys offsets from projects near discharges from its flue stacks.
  • A regional government owned water operation buys in the same state/province as the operation.

• Buy credits with a perceived marketing benefit
  • Forestry units consistently popular even if 10 x more expensive, especially with industries which use paper. Hydro and other clean technology units also popular.
  • Global building products manufacturer buy African clean water units – healthy children.
Why do some industrial operators not buy the lowest cost units?

**Sustainable Deployment**

Type: Water Purification  
Location: Kenya, Africa  
Standard: Gold Standard VER  
Reference: GS 886  
Est. Reductions: 2,073,328 tCO$_2$e per year
Offsets Management

Forecasting, Selection, Optimisation

- Reporting boundary (regulatory risk)
- Reporting Method (measurement cost, regulatory risk)
- Production plan
- Efficiency curve
- Tonne CO2-e / tonne product
- Forecast number offsets needed
- Which offsets acceptable? Lowest price? Best marketing?
- Marketing Benefits Local? Trees / Water / Children?
- Risk appetite
- Optimise offsets buy / sell

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The need for professional skills

• Understanding the carbon offsets options for a company requires a mix of professional skills
  • process engineering,
  • accounting,
  • legal,
  • audit, audit,
  • marketing,
  all with carbon expertise.
External professional skills used during the introduction of carbon reporting and payment in Australia
Quantifying the support needed.

• All of the major companies are captured by the carbon schemes. Early movers will be able to minimise costs and improve their competitive position within their industry.

• In Australia 300 liable entities spent average AUD$0.5-1 million (CNY¥3-6 million) each. California similar.

• Seven trading schemes already operating in China cover about 2,000 companies; a national scheme would cover more than 10,000 companies. Each of those companies must get ready for the mandatory reporting and the carbon trading schemes... no matter if they are state owned or private companies.
What value will they add?

• Those carbon professionals will:
  – Help determine what must be reported and how it should be measured.
  – Build systems for companies so they can calculate and report their carbon emissions.
  – Find the opportunities for companies to capitalise from the new carbon schemes compared to their competitors.
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Thank You

Questions?

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