



Corporate Offset Project Development

Andrew's "DITY" Strategy

Considerations, Requirements & Lessons Learned

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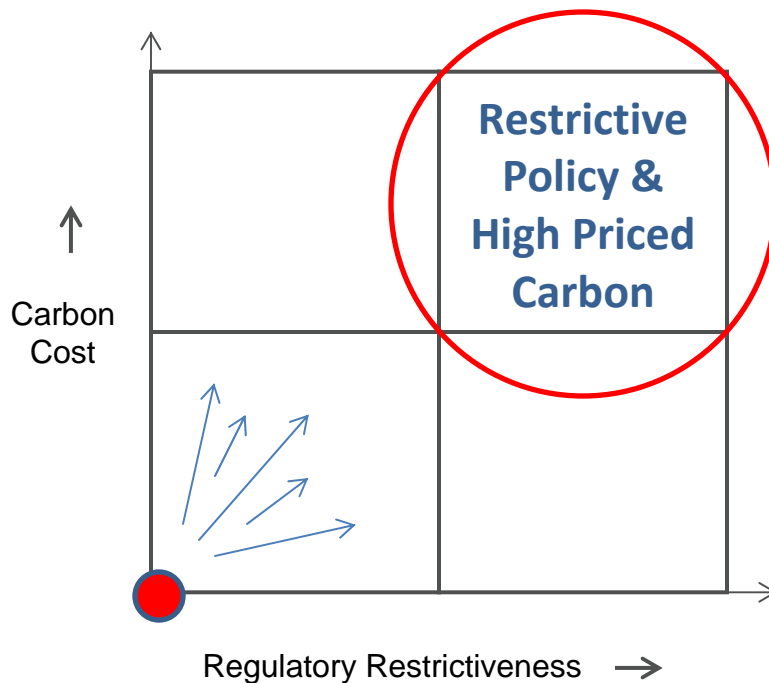
EPRI Offsets Workshop

Seneca Qualifications



- Operating and Executive Committee members of a Fortune 500 global energy company
- Expertise and unique market experience (management created and implemented one of the largest corporate alternative energy businesses in the world)
- Management oversaw development, construction, and operation of over 1,000MW of wind generation
- Management designed and implemented a global carbon offset strategy, which over three years built a portfolio of projects generating in excess of 2.1m tonnes/year and a development pipeline of carbon projects with the capacity to generate annual production of >9.5m CERs per year in 14 countries on five continents
- Transaction, development, and operating experience in North America, Europe, Asia, Middle East, and Latin America
- Developed or acquired over 700 registered, CER-producing projects in the renewable energy, landfill gas, palm oil mill effluent, wastewater treatment, waste heat recovery, and contained animal farm operation sectors

Considerations



- Materiality of regulations? Is there a requirement for action? Now or in the future?

Core Business Considerations

- What are impacts on core business in terms of cost, operations, capital requirements, cash flows, accounting, tax, and balance sheet?
- What are the impacts on development activity in terms of same?

Hedging/Risk Management Considerations

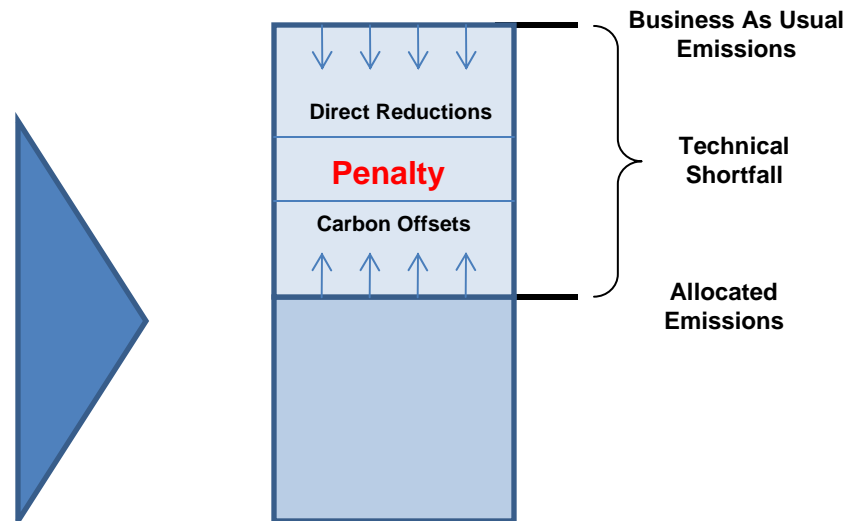
- In uncertain regulatory environment and uncertain price regime, what alternatives are available to hedge potential exposure?
- What are associated costs of various alternatives?
- What resources are required to access/implement various alternatives?

Market-based Regulatory Structure

High Level Construct Points

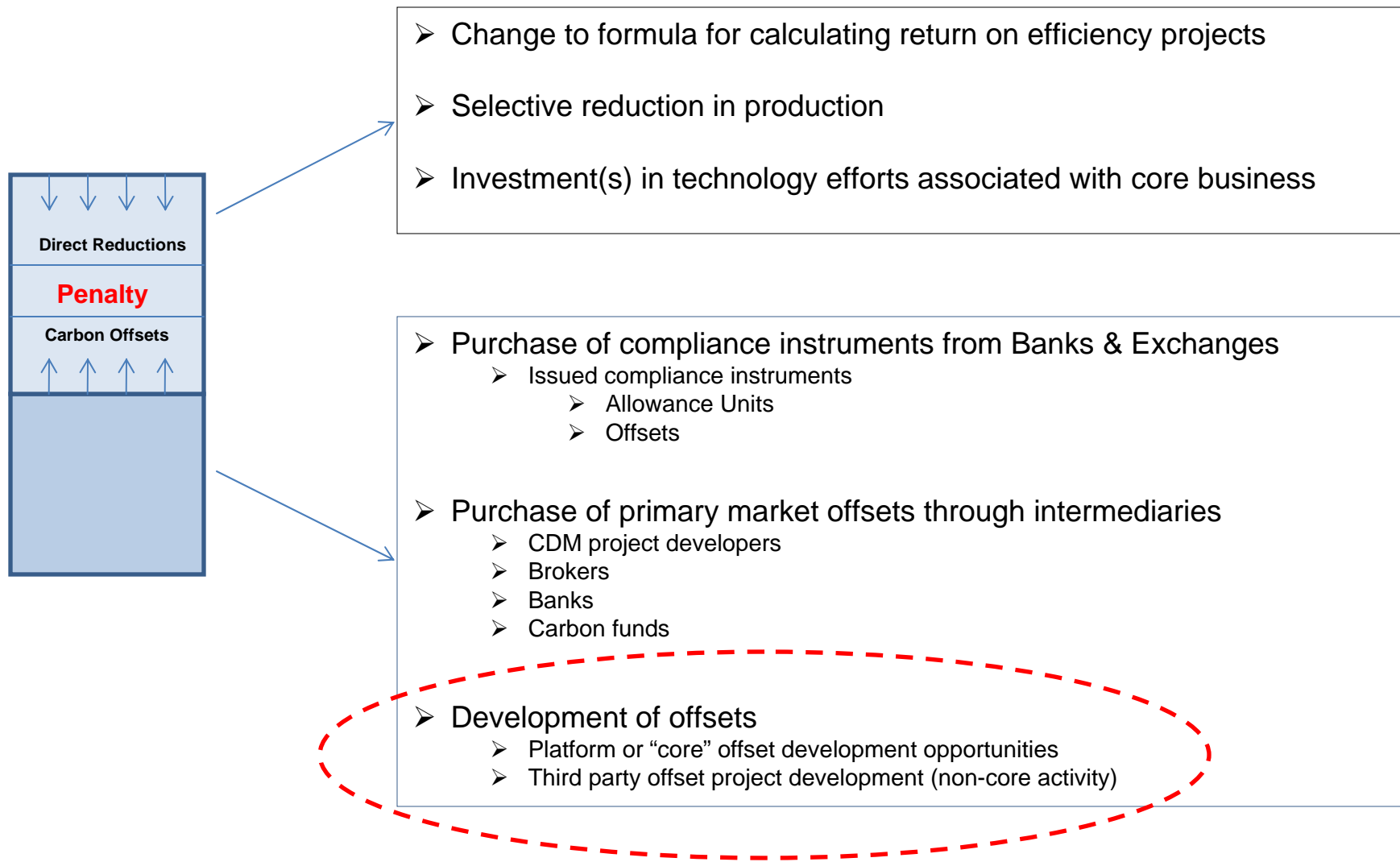
- Regulations set emissions reduction requirements & standards
- Parties can lower their emission profiles or purchase compliance instruments to meet reduction requirements
- Financial penalties will be imposed on those who fail to meet reduction requirements

"Generic" Market-based Regulatory Structure



The difference between business-as-usual emissions and allocations (technical shortfall) is addressed by direct reduction of emissions and carbon offsets

Evaluation of Alternatives



Offset Development Strategy Overview

Develop a comprehensive offset strategy to: i) provide a macro-hedge to corporate carbon exposure, ii) inform core business operations and M&A, and iii) develop a profitable stand-alone business

Project
Development

Construction, O&M

Regulatory
Development

Ongoing Regulatory (Verification & Issuance)

Trading & Commercialization

Internal

- Renewables – wind, solar, hydro
- Land management
- Waste stream management
- Efficiency
- Other

External

- CAFO
- VAM
- Wastewater treatment
- Landfill gas (to energy)
- POME

Rationale: Benefits, Challenges & Risks

Benefits

- Lowest cost of compliance
- More operational control of projects/risks
- Lower risk profile
- **Learning** – operational, regulatory, and development
- Potential expansion – new line of business

Challenges

- Different development model
- Limited history in offset markets (for everyone)
- Limited service providers
- Limited availability of experienced commercial talent
- Every project is LOCAL - PERIOD

Risks

- Regulatory Environment
- Market Demand for Offsets
- Market Price for Offsets
- Competitive Development Environment

Lessons Learned (Not just from project development)

- There IS a price for carbon in the US – TODAY. The problem is that it's unknowable
- “Carbon” is a nascent sector with: limited history, limited experienced resources (particularly talent with commercial capabilities), participants with a widely varying level of sophistication, and broad reach
- Nature of “markets” is not generally consistent with risk mindset of exposed entities
- Complex regulatory environment(s) (still in development)
- Experienced talent is limited AND difficult/expensive to access
- An offset business model is NOT the core competency of most emitters

Lessons Learned (cont.)

- Offset projects expose you not only to the carbon compliance sector, but also to the underlying sector in which the project operates
- Dedicated resources are a REQUIREMENT across a variety of specialties
- Implications are BROADER than might be expected (focus early on cash flow, balance sheet, accounting considerations, tax considerations, cross border and cross jurisdictional legal requirements, etc)
- Understand the regulations – existing regulations are NOT just about the environment, and regulations in development target broader issues as well – understanding the drivers can materially help manage risks and performance

Thanks

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