

Carbon Finance

Ideas for transportation infrastructure

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Goals and Objectives

- Introduce Kaufman Bros., L.P. and our alternative energy initiative
- What are we seeing in the market, and how can it be used
- Overview of a product that shows potential
- Description of offsets
- What makes carbon credits valuable
- Carbon credit ideas for transportation infrastructure
- Conclusions

- A full-service investment bank and institutional broker/dealer focused on the technology, media, telecommunications, and alternative energy industries
- Founded in 1995
- Offices in New York, Boston, San Francisco and Dallas

What are we seeing and how can it be used?

- Green tech ideas
 - Solar
 - Wind

- New products
 - Cogeneration
 - MSW to bio-fuels

- Most of them apply to U.S. issues
 - 100% of NHS are paid for by tolls and user fees (includes gasoline taxes)
 - Increase in mileage standards and new technologies means a decrease in revenues to fund the infrastructure

VMT's (Vehicle Miles Traveled)

- **U.S. Issues:**
 - Technology
 - Cost
 - Privacy

- **Solution: Truck based VMT - Delcan**
 - More than 50% of large trucks already have required equipment installed
 - Low cost to equip additional trucks (\$300)
 - Privacy is not applicable to commercial enterprises

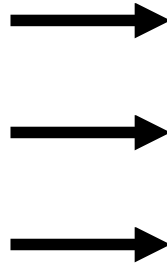
What Delcan's System Does

- **Intelligent Transportation Systems (ITS)**
 - Aggregates data
 - Real time location and fuel consumption information
 - Analysis to improve traffic flows
- Improves freight efficiency
- Support for freight planning
 - Orders and destination data
 - Fuel use data provides actual costs
 - Customer service
- Greenhouse gas analysis
 - Potential for carbon credits???

- Create a carbon methodology for a system like Delcan's
- Subsidize Cost of Goods Sold (COGS) with carbon credits
- Could qualify for CDM financing if you establish VMT system in a Kyoto Annex II country
- Improving supply chain efficiencies will eventually lower costs and foster new investment

- **Allowances** – Issued by a government or designated agency
 - Some governments, such as the U.S. plan to auction these, but Kyoto Annex II countries don't have cap, so therefore no allowances
- **Offsets** – Credits created through investment in clean tech and renewable space

Project Based Credit Development (Offsets)



- Locate dirty technology or power source
- Replace or retrofit with clean power source
- Convert CO₂ savings (metric tons) to carbon credits

- **Geography**
 - Is the project located in a Kyoto Annex II Country?
 - Is it located in the United States?

- **Methodology**
 - Some projects are easier to develop than others
 - Different project types are more marketable than others

- **Verification Agency**
 - Gold Standard
 - CCAR standard in the U.S.

Solar Cells on Telephone Poles



- **New Jersey Plan**
- **Pros:** Takes advantage of current infrastructure
- **Cons:** Cost (not commercially viable without subsidies), inefficient power transfer

Solar Farm on a Large Plot of Land



- **Denver International Airport**
- **Pros:** Efficient use of undeveloped infrastructure land
- **Cons:** Energy transfer, maintenance, geography



- **CCAR Methodology**
- **Pros:** Available forest and urban land, public support for urban renewal
- **Cons:** CCAR is U.S. based, maintenance could limit future growth

Cogeneration



- **American DG Energy**
- **Pros:** Small scale, quantifiable savings
- **Cons:** Subject to utility provider's method to determine savings

- More than 90 different methodologies including:
 - Landfill projects
 - Replacing light bulbs
 - Biomass
 - Geothermal
 - Fuel switch

- New products
- Carbon can be used to partially offset infrastructure finance costs
- Clean tech, energy efficiency, conservation

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