

**Your methane is worth a fortune**

Livestock producers around the country work with Environmental Credit Corp. to generate revenue from CO<sub>2</sub> emissions credits, which can be sold to other industries.

**ECV Lagoon Cover Program**

It's easy, and it's risk free. We design, finance, and manage the installation for you and guarantee the system against our Climate Exchange or other global markets.

Don't let your methane go to waste... ask for an application and sign up today!

**Environmental Credit Corp.**

1-800-778-8378  
Visit us at [www.envcc.com](http://www.envcc.com), or call 800-778-8378.

**Carbon Credits:  
A New Source  
of Eco-Service  
Revenue for  
Livestock Producers**

March 2008

Jim Jensen,  
VP Business Development  
Environmental Credit Corp  
[www.envcc.com](http://www.envcc.com)

---

---

---

---

---

---

---

---

**Global Climate Change: It's a New World**

**SCIENCE COVERAGE**



**NEWS COVERAGE**



**Environmental Credit Corp.**

---

---

---

---

---

---

---

---

**Global Climate Change: It's a New Market**

**World—Kyoto Protocol Compliance Requirements**

- UN Framework Convention on Climate Change (UNFCCC) Worldwide (169 countries)
- Certified Emission Reductions (CERs)
- European Climate Exchange (ECX)
- Joint Implementation (JI)
- Clean Development Mechanism (CDM)

**U.S. —Early Action Voluntary Commitments**

- Chicago Climate Exchange (CCX)
- California Climate Action Registry (CCAR)
- Regional Greenhouse Gas Initiative (RGGI)
- Renewable Energy Credits (RECs)
- Private — for profit and nonprofit

**Environmental Credit Corp.**

---

---

---

---

---

---

---

---

### Global Markets: Cap and Trade


**"Cap and Trade" Systems Solve Big Problems**

The CAP: Limits the total amount of gas emissions, typically affecting largest emitters: energy, manufacturing, and transportation sectors.

TRADING: Regulated companies trade surplus allowances; nonregulated companies trade offsets, using the free market to find the most cost effective methods.

**REAL WORLD PROOF: When was the last time you worried about acid rain?**

"Using market forces to efficiently and cost-effectively reach emission reduction goals makes sense for the environment and our economy."




---

---

---

---

---

---

---

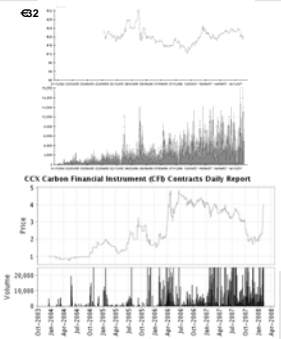
---

---

---

### Carbon market summary

- Europe
  - 1.4 billion metric tons traded in 2007
  - ~\$40 billion market
  - Market growing faster than predicted
- U.S.
  - ~23 million metric tons traded in 2007 (CCX)
  - 80% increase in demand
  - ~\$100 million (overall market)
  - Future: \$1 trillion




---

---

---

---

---

---

---


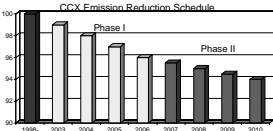

---

---

---

### US Market – Chicago Climate Exchange

- Chicago Climate Exchange®** is a voluntary, legally binding pilot greenhouse gas reduction and trading program for emission sources and offset projects.
- Pilot Phase, 2003-2006: Reduce emissions to 4% below 1998-2001 baseline
- Phase II, 2007-2010: Additional reductions to 6% below baseline by 2010
- Includes major direct emissions (all GHGs) for large emitters; small sources (e.g. fleets) and electricity purchases may be included
- Annual true-up and verification


---

---

---

---

---

---

---

---


---

---






### Steps to Creating/Selling Carbon Credits



1. Project delineation
2. Registration
3. Protocol development
4. Measuring
5. Monitoring
6. Verification
7. Certification
8. Credit issuance
9. Credit aggregation/sale




---

---

---

---

---

---

---

---

---


---

### Carbon Credits from CCX (from website)

CCX has developed standardized rules for issuing carbon credits for the following types of offset projects:

- Methane Destruction (landfill, livestock, and coal mine)
- Agricultural Soil Carbon (no-till, strip-till or ridge-till and grass cover planting in specific geographic areas)
- Rangeland Soil Carbon
- Forestry Carbon
- Renewable Energy
- Energy Efficiency and Fuel Switching
- Clean Development Mechanism Eligible Projects
- Other GHG emission mitigation in Brazil

*New Development: Methane Avoidance (e.g., composting)*




---

---

---

---

---

---

---

---

---

---


### Proposed Federal Legislation

#### Comparison of Legislative Climate Change Targets in the 110<sup>th</sup> Congress, 1990-2050

September 17, 2007

WORLD RESOURCES INSTITUTE

For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/publications>. WRI does not endorse any of these bills. This analysis is for comparative purposes only. Data post 2010 may be derived from extrapolation of US projections.




---

---

---

---

---

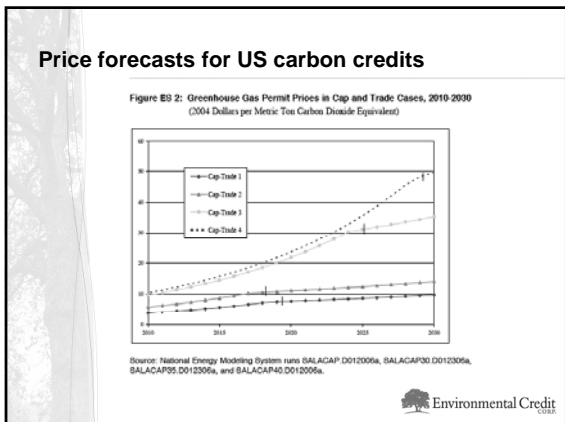
---

---

---

---

---




---

---

---

---

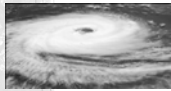

---

---

---

---

### How Do You React to Changing Environments?

- Energy crises » opportunities
- Regulatory changes » challenges
- Climate change » new markets

- Keys to SUCCESS
  - ✓ Vision and innovation
  - ✓ Deploy new technologies
  - ✓ Turn weakness to strength

Environmental Credit Corp.

---

---

---

---

---

---

---

---

### Environmental Credit Corp.

- Having established a large and reliable source of carbon credits Environmental Credit Corp. is a leading supplier of high-quality credits to global financial markets.
- Funded by one of the world's largest private capital carbon funds.
- We are developing cost-effective, long-term projects that reduce greenhouse gases.
- By creating economic value from environmental benefits, we demonstrate our commitment to a balance between profitability and environmental stewardship - for us, our partners, our world.

Environmental Credit Corp.

---

---

---

---

---


---

---

---

### ECC Target Sectors for Project Development

- Animal manure methane capture
- Landfill and wastewater methane capture
- Biofuel production and use
- Coal mine methane reduction
- Methane avoidance
- High density gas reclamation
- Energy from renewables
- School and institutional energy efficiency



---

---

---

---

---



---

---

---

### ECC Agricultural Projects

- More than 2 dozen livestock production farms under contract
  - Dairy and swine projects in 10 states
  - Represents more than 3 million credits over 10 year terms
- Accomplishments:
  - First carbon credits for US dairy producers
  - Largest annual award to a US dairy producer
  - Largest market share for livestock ag-methane credits in the US



---

---

---

---

---

---

---

---

### ECC Expands with Lagoon Cover Program

- ECC pays for lagoon cover and installation
- ECC owns and insures cover
- ECC pays for all major maintenance
- Producer receives annual payments based on carbon credit value
- Producer can use the biogas or share in the value of commercial gas uses



Rob Hilander  
Lindsay, CA

---

---

---

---

---

---

---

---

### Problem: Open-Air Lagoons (“baseline scenario”)

**Air Quality Concerns:**

- Odor
- Ammonia
- Greenhouse gas emissions

Environmental Credit

---

---

---

---

---

---

---

---

### Solution: Covered Lagoons or Digesters

**Results:**

- Reduced odor
- Reduced greenhouse gases

Environmental Credit

---

---

---

---

---

---

---

---

### Why Lagoon Covers Work

**Keep it Simple Principle**

- Well-proven technology (100s of applications)
- Easy to understand designs
- Add on to existing manure handling system
- Quick installation by a well-qualified vendor
- Low operation & maintenance requirements
- Great farm benefits: odor/pest control, rainwater/sand diversion
- Enhanced waste treatment-nutrient management
- Positive public perception
- Good gas production with adequate time in all locations
- More biogas per dollar invested
- On-farm renewable energy source

Environmental Credit

---

---

---

---

---

---

---

---

### Lagoon Cover Installation



Environmental Credit  
CORP

---

---

---

---

---

---

---

---

### Lagoon Cover Installation



Environmental Credit  
CORP

---

---

---

---


---

---

---

---

### Lagoon Cover Installation



**Coyne Farms**

- 1,400 cow dairy
- 7 million gallon lagoon
- Avon, NY, 20 miles south of Rochester
- Guaranteed income
- Buy-out provision
- Odor control & rainwater diversion
- *"Here's a company that does all the work, and you still get something out of it. This is right up our alley."* Malachy Coyne

Environmental Credit  
CORP

---

---

---

---

---

---


---

---

### 2008 Economics Example

**POTENTIAL REVENUE:**

- Facility size = 2000 cows
- Est credit potential = 4 credits/cow
- Est credit value = \$4-\$7/credit
- Est gas = 120,000 cu ft/day of biogas
- Guaranteed income & buy out provision




**POTENTIAL CAPITAL:**

- Lagoon cover alone = \$100,000 - \$200,000
- Gas use-generators = \$100,000 - \$200,000
- Digester & generators = \$2 million+

**OPERATION & MAINTENANCE:**

- Lagoon cover = simple
- Digester = complex and expensive




---

---

---

---

---

---

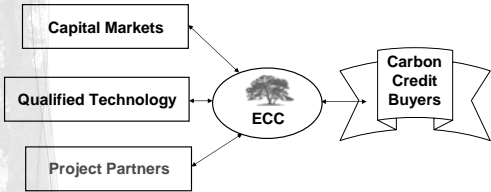
---

---

---


---

### How is this possible?



```

graph LR
    CM[Capital Markets] --> ECC((ECC))
    QT[Qualified Technology] --> ECC
    PP[Project Partners] --> ECC
    ECC --> CC[Carbon Credit Buyers]
  
```




---

---

---

---

---

---

---

---


---

---

### Forward Credit Sale Assures Return

**“Cows, Climate Change and Carbon Credits:  
How a Big U.S. Utility Plans To Use Cattle to Offset Coal”**  
*Wall Street Journal, June 14, 2007*

- American Electric Power has agreed to prepurchase a significant number of credits from ECC's Lagoon Cover Program.
- American Electric Power is responsible for 145 million tons of carbon dioxide annually.
- *“Letting companies like coal-burning utilities buy up cheap carbon credits is very legitimate. The atmosphere doesn't care what the source of greenhouse-gas emissions is, so starting with the cheapest ones means that you can do more with the same amount of resources.”* William Hohenstein, director of the global-change program at the U.S. Department of Agriculture.




---

---

---

---

---


---

---

---


---

---



**It's Time to Act  
THANK YOU**

*"I think there is something, more important than believing: Action! The world is full of dreamers, there aren't enough who will move ahead and begin to take concrete steps to actualize their vision." — W. Clement Stone*



---

---

---

---

---

---

---

---