



A Successful Model for Industrial Energy Efficiency and Clean Technology

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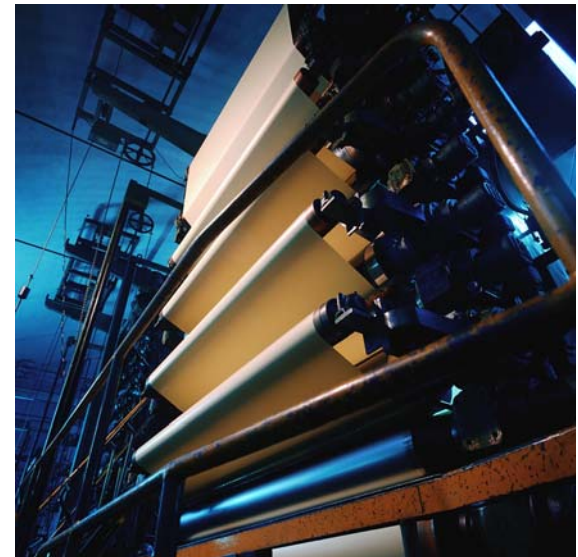
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CleanTech Partners (CTP): A Private, Non-profit 501(c)3 organization since 2003

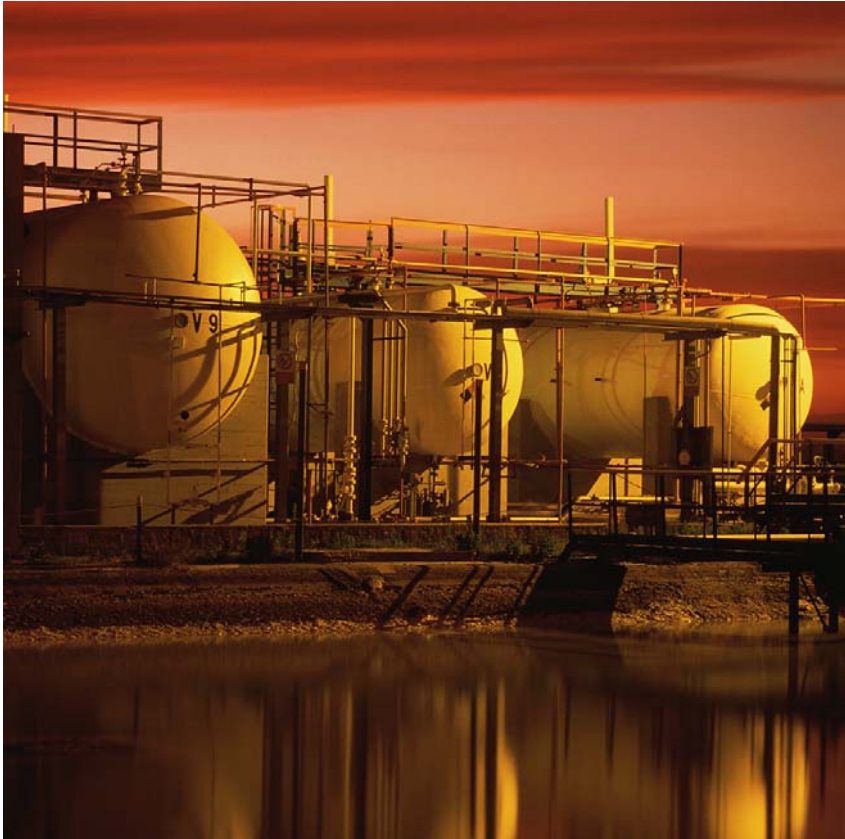
- CTP Mission: save energy through industrial technology deployment.
- Vision: deploy technologies in order to meet energy efficiency goals.
- Funding sources: public-private energy efficiency partnership.
- Team: Seven (7) FTE employees plus consultants.
- Technology investment fund: energy efficiency projects.
- Oversight: external CTP Board of Directors.
- Annual energy-saving goals and proven results.
- Annual and periodic financial and compliance audits.
- Monthly deployment and progress reports.
- Annual approx internal goals: 1000 kW, 8 million kWh, 500,000 GJ

Why Industrial Energy Efficiency and Clean Technology?

- Save new infrastructure
- Conserve resources
 - Fuel for process & power
 - Water & wastewater
 - Land & raw materials
- Reduce emissions
- Sustainability
- Results to bottom line
- Right thing to do



Technology Definitions



- Industrial Efficiency – produce more using less energy
- Clean technologies emit less
- Best Practices (BP) Technology
 - Market-proven, -demanded
 - Broad acceptance in industry
 - Little or no perceived risk
- Emerging Technology (ET)
 - Commercially available
 - Beyond R&D
 - Limited acceptance
 - Real or perceived technical risk
 - Future best practices

CTP Works With Industry

- Accelerates the deployment of emerging technologies and best practices
 - Technology investment fund
 - “Recycling of money,” thus, to implement more efficiency
 - CTP seeks out available financial incentives (grants) to offset part of the project cost and technology fund exposure

- CTP unbiased experts in:

Business startups	Investment and banking
Project management	Energy Generation and utilization
Engineering	Chemistry
Product development	Pulping & papermaking
Metal casting	Food processing
Biofuels	Plastics
Energy-intensive manufacturing	Government relations

Clean Technology Deployment

- Funding limits established per client or project by rules and CTP Board
- Financing options attractive to clients
 - True shared-savings capital leases (not re-paid unless energy savings measured)
 - True shared-savings operating leases, off balance sheet (not re-paid unless energy savings measured)
 - True shared-savings loans
 - Conventional loans with fixed monthly payments or balloon payment
- Offers a niche not served by the private sector:
 - Early stage of technology acceptance
 - Tech doesn't fit the venture capital profile
 - Early demos not yet ready for commercial banks
 - Projects too small for institutions

Clean Technology Deployment

- Process
 - Technology identification and evaluation – over 800 to date
 - Thorough technology, business, management, financial reviews
 - Deal structure, term sheets, legal documentation
 - Investment board approval
- Deployment – CTP works hand-in-hand not “at arm’s length” with clients
 - CTP’s work is just beginning when the investment is made
 - Business and financial planning includes identifying partners
 - Work with state and federal regulators to facilitate permitting
 - Leverage economic development resources for tech commercialization
 - Assistance with grant identification and/or writing
 - Measurement / quantification of results – energy and non-energy benefit

Conclusions

- Efficient and clean industrial technology deployment:
 - Critical to meeting energy efficiency goals
 - Should focus on both best practices and emerging technologies
- CTP investment model is successful and proven
- CTP has unique capabilities and expertise
- CTP offers many synergies to project partners
- Energy efficiency **pays for itself** and is worth investment

Questions?

Thank You

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Note: self-funded time and travel expenses, not covered by CTP or any other entity.