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Travis Osborne,  
Holcim (US) Inc.

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#### Founding Companies

Alabama Power  
Ciba Corporation  
E. I. DuPont  
Evonik Degussa

#### Project Partners

US Business Council for  
Sustainable Development

The Forum

Mobile Area Chamber of  
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## What is *By Product Synergy Central Gulf Coast*?

Under the leadership of Partners for Environmental Progress (PEP), *By-Product Synergy Central Gulf Coast* (BPS CGC) benefits area business by employing a multi-industry collaborative approach to identifying and realizing opportunities for cost savings and innovations.

#### At its core, *By-Product Synergy Central Gulf Coast* is:

- A Process
  - ✓ That turns one organization's waste, or by-product, into a valuable resource for another organization
  - ✓ That teams private and public concerns in voluntary, cross-industry arrangements.
  - ✓ That measures environmental progress
- A Business-Driven Solution
  - ✓ That helps make our region *lean and green*
  - ✓ That creates *economic and environmental value*.

#### BPS Central Gulf Coast is NOT:

- A mandated government program
- A charity – it must create economic **value**
- A replacement for existing programs
- A competitor to waste management firms
- A solution to every conservation issue
- Limited to Mobile & Baldwin Counties

#### Examples of By-Product Synergies:

- A cement manufacturer uses the slag from a neighboring steel mill in its production process resulting in a 10% increase in production output and a 30-40% decrease in nitrogen oxide emissions.
- A major US chemical company identifies synergies between six of its own plants with an estimated annual cost savings of \$15 million and total annual energy savings of 900 billion BTU.
- Two of the first companies to adopt the by-product synergy concept were jointly owned Chaparrel Steel and CemStar Cement. Synergies resulted in CemStar's achieving:
  - ✓ 5-15 % production increase
  - ✓ \$8/ton slag to \$70/ton cement
  - ✓ 10 % CO2 reductions
  - ✓ 25-45% NOx reductions
  - ✓ 2 EPA climate change awards
  - ✓ *If this was applied to the entire U.S. cement production, it would result in 8.8 MM tons of CO2 annual reduction.*
- Dow Chemical: By searching for synergies in just 6 of their own plants, Dow Chemical achieved:
  - ✓ Total waste reduction: 155 MM lbs/yr
  - ✓ Total potential saving if all wastes converted to product: \$20 million dollars/yr.
  - ✓ CO2 emission reduction: 54,000 tons/year

## **The Keys to Unlocking Synergies**

*By-Product Synergy Gulf Coast* gives participants a practical and proven method to reduce costs and promote innovative materials uses

- Signed legal agreements establish the framework for a safe, confidential consortium
- Data collection seeks enough information to allow for understanding across fence lines.
- Trains companies to identify synergies and expand existing synergies
- Participants negotiate relationships once synergy possibilities emerge
- Provides implementation assistance for business synergies
- Regulators are engaged from the beginning
- Diverse companies/entities participating providing more opportunities to identify synergies: by-product, transportation, energy sharing...
- Communicates Results

## ***By-Product Synergy Gulf Coast* helps participants**

- Reduce costs for materials, energy, disposal and transportation
- Identify new market and product development opportunities
- Measure their environmental progress.
- Become more sustainable and profitable

## **Metrics**

- Economic: Revenues, savings, investments
- Environmental: Energy, GHG, water, waste
- Social: Jobs created/saved

## **Who's Involved**

North Gulf Coast Area Companies

Metro Mobile and the Central Gulf Coast area have a diverse industrial base. Many of these companies see waste reduction and resource efficiency as key to their global competitiveness. *By-Product Synergy Central Gulf Coast* includes small and large companies from a wide range of industry sectors who share a commitment to finding innovative ways to maximize their resources and capitalize on new market opportunities.

## **BPS CGC Implementation Requires a Public & Private Funding Model**

Broad-based support and broad-based funding

- Local, state and federal governments grants
- Funding from participants, \$5000 for the first year
- Local environmental business groups including PEP and The FORUM
- Quality
- Energy

The design of *By-Product Synergy Gulf Coast* is based upon the U. S. Business Council for Sustainable Development (US-BCSD) process design which has been used to develop by-product synergy networks in several U.S. metropolitan areas. The United Kingdom's National Industrial Symbiosis Programme (NISP) will also share its by-product synergy experience and case studies to accelerate our progress. US-BCSD coordinated projects are on-going or just beginning in Chicago, Kansas City, Puget Sound Region, Ohio, San Francisco, Denver, Southeast Michigan and Massachusetts. *By-Product Synergy Central Gulf Coast* will be the first multi-company project on the Gulf Coast and in the Southeast U.S.