

# **Alianza Verde Automotriz**

## **Roundtable Discussion**

**7 December 2011**  
**General Motors Company**  
**Mexico City, Mexico**



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# Agenda

- **Opening Comments and Welcome**
- **CEC Project Opening Comments**
- **Roundtable Introductions**
- **Overview of Suppliers Partnership For the Environment – United States**
- **Discussion of Concept Paper**
- **Key Issue Discussions**
  - **Water Use and Availability**
  - **Energy**
  - **Recycling and Resource Creation**
- **Facilitated Discussion of Presentations**
- **Next steps**
- **Closing Thoughts**
- **Closing Comments**
- **Lunch**

# Improving the Economic and Environmental Performance of the North American Automotive Industry Supply Chain

**Benjamin Teitelbaum**  
Special Projects' Coordinator

**7 December 2011**  
Mexico City, Mexico



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## Context

### NAFTA as % of world car production

#### World passenger car production (% share) 2006

source: ACEA - European Automobile Manufacturers' Association





## WORLD MOTOR VEHICLE PRODUCTION BY COUNTRY AND TYPE

ALL VEHICLES	2009	2010	% change
<b>EUROPE</b>	<b>17,055,842</b>	<b>19,822,626</b>	<b>+16.2</b>
<b>AMERICAS</b>	<b>12,562,420</b>	<b>16,641,416</b>	<b>+32.5</b>
<b>NAFTA</b>	<b>8,782,931</b>	<b>12,177,590</b>	<b>+38.7</b>
CANADA	1,490,482	2,071,026	+39.0
MEXICO	1,561,052	2,345,124	+50.2
USA	5,731,397	7,761,440	+35.4
<b>ASIA/OCEANIA</b>	<b>31,760,155</b>	<b>40,900,579</b>	<b>+28.8</b>
<b>AFRICA</b>	<b>413,451</b>	<b>493,084</b>	<b>+19.3</b>
<b>TOTAL</b>	<b>61,791,868</b>	<b>77,857,705</b>	<b>+26.0</b>



# Facts & trends

- Mexico is now the 9<sup>th</sup> largest vehicle producer in the world – up from 10<sup>th</sup> in 2009;
- Mexico is the largest exporter of auto parts to the US > greater than Canada & Japan;
- Auto industry accounts for 18% of Mexico's manufacturing GDP;
- In Canada production of motor vehicle increased by 22.3% in 2010;
- In the 1<sup>st</sup> half of 2010, Canada's manufacturers saw revenue up 61.5%.



# Project Summary

- Re-engage key automotive companies for the development and implementation of green supply-chain programs across North America
- Built on the success of the work started in the United States, to allow both Canada and Mexico to benefit from initial efforts in the United States and build trilateral cooperation
- Share information and best practices that will enhance the environmental and economic performance within the North American auto manufacturing and parts supply chain.



# Environmental Vision

Reduce environmental impacts of the automotive manufacturing supply chain while enhancing competitiveness through engaging experts to facilitate the development and implementation of formalized Automotive Green Supply Chain programs in Canada, Mexico and the United States.





## Short Term (Timeline: spring 2011 - spring-summer 2012)

- Organize a core of automotive manufacturers and suppliers to green their supply chains within Canada and Mexico;
- Exchange of resources, information, and tools within the sector towards greening the supply chain between manufacturers and suppliers





## Mid Term (timeline - starting summer-fall 2012 and continuing onwards)

- Create and expand business-driven *self-supported auto supplier partnerships in North America* (Canada, Mexico and the United States)
- Reduce environmental impacts and improve economic capacity through activities adopted by auto supplier partnership programs
- Reduce the environmental footprint of the automotive supply chain and improve competitiveness for the automotive sector





# Lean and Green Assessment Opportunity

Conduct a 'lessons learned' initiative to share amongst automotive suppliers and manufacturers engaged in the supply chain program. This initiative will involve a three-day training effort at a selected facility. An expert will visit the site, conduct an assessment, and work with the facility staff on how to identify opportunities to locate materials, energy, water and utility savings, and improve key processes within the facility.

It will also provide strategies and tools for integrating environmental factors into the supply chain program, showing how to bridge the gap to reduce and eliminate waste of all kinds. Lessons learned from the training effort will subsequently be documented and shared amongst automotive suppliers and manufacturers. Please contact Steve Hellem if your company would be interested in this assessment opportunity.

*Thank You/Merci/Gracias*

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Three countries. One environment.



# Suppliers Partnership for the Environment (SP)

## Overview Presentation

Steve Hellem, Executive Director  
*December 7, 2011*



# Suppliers Partnership for the Environment

## Vision:

Association of automobile OEMs and their suppliers working in collaboration with the US EPA and other governmental entities to identify and implement creative projects and programs that will advance environmental sustainability while providing economic value to the automotive supply chain through strategic action and engagement.

## Mission:

A forum for large, medium and small service and product vendors and vehicle manufacturers to develop and share tools, information, knowledge, good practices and technical support to ensure that the suppliers' products and their processes provide environmental improvement and cost savings to SP participants.



# 2011 SP Members / Liaisons





# SP Work Groups

- **Chemical Issues:** Creating Materials Health & Environmental Assessment Strategy (MAS) to develop a common screening process for OEMs and their suppliers. Addressing global chemical regulations that are impacting product/material engineering and manufacturing.
- **Energy and Water:** Sponsoring and supporting ongoing collection and dissemination of information, discussions and action between automobile OEMs, their suppliers, the utility industry and government entities, on energy and water issues affecting the operations of companies in the automobile supply chain.
- **Materials Efficiency:** Developing and deploying environmental technologies and programs in order to reduce environmental impacts, gain financial value, as well as promote environmental sustainability.
- **Technology and Networking:** Connecting suppliers that have unique, environmentally responsible technologies with OEMs and Tier 1 Suppliers. Supporting a forum for Tier 2 and Tier 3 suppliers to the industry so that their issues and ideas can be addressed by OEMs and Tier 1 supplier companies.



# Success Stories

Aevitas Specialty Services (formerly General Oil Company)

Using Chrysler's Energy Management Handbook in the SP Energy Work Group, a small SP member company achieved the following savings:

## Water

- Reduced consumption by 40% and identified \$250,000 of associated savings.

## Steam/Natural Gas

- 13% natural gas savings from February to May 2007 over same time period in 2006.

## Lighting/Electricity

- Electricity savings of 3% or 5,000 kWh in 2008



# Success Stories – Federal-Mogul

## Quiet Shield G Project

- Developed a process to convert Asian/ U.S cardboard and recycled textile fibers into a non-woven substrate for use as an acoustic material.

### *Objectives:*

- To reduce waste in the assembly plants and turn it back into usable parts in the vehicle.
- Final non-woven substrate to contain 25-75% Cardboard.
- Material must meet technical, commercial, and economic targets

### *What's Next:*

- Working with GM on the Volt and Epsilon II platform.
- Continuing to explore use of alternative materials
- Exploring incorporation of additional processes

# Success Stories – Member Collaboration



**GM**

**Installs Parts in  
Chevrolet Volt**



**GDC Inc.**  
**Produces Volt  
Components**



**Mobile Fluid  
Recovery**  
**Extracts Oil and  
Wastewater**



**Heritage  
Environmental**  
**Collects Booms**

# Success Stories – FTS Technologies



## GM Eliminates Solvent from Suppliers' Paint Process

Adhesion alternative is energy efficient and practically emission free

2011-08-23

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DETROIT – General Motors is introducing a flame treatment technology that lets paint stick to plastic vehicle parts like instrument and door panels without using primers that contain solvents and can foul the air.

The use of solvents in paint primers is an industry-wide challenge. GM is committed to reducing emissions throughout its manufacturing operations and supply chain, so it manages traditional solvents through recycling, conversion to energy and superheating the gases to break them down. However, these are energy-consuming, costly processes.

This flame treatment technology instead uses an energy-efficient, robotic system to create a molecular change to the surface of the plastic, making it bond with the paint. The process eliminates the need for an adhesion-promoting primer.

GM evaluated the new technology as a total business case. Not only does it improve efficiency since it's faster than spraying primer, but the capital expense pays for itself in less than four months. It's being used on the Chevrolet [Cruze](#), [Sonic](#), and [Volt](#).

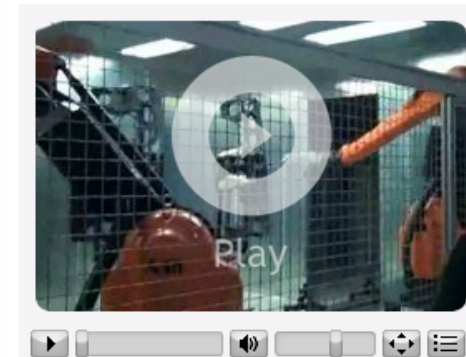
By using it on the Cruze, for example, GM suppliers:

- Reduced solid and liquid waste (filters, cleaners, solvents and coatings) from 48 tons a year to less than one.
- Decreased air pollutants from 810 tons a year to 80 tons a year.
- Eliminated landfill waste like paint sludge and painted scrap material from 25 tons to nearly zero.

GM learned about this technology through [Suppliers Partnership for the Environment](#), a working group of U.S. automakers, their suppliers and the Environmental Protection Agency. Whitmore Lake, Mich.-based supplier [FTS Technologies](#) was striving to get its flame treatment technology implemented and approached John Bradburn, GM's manager of waste-reduction efforts.



### VIDEO



[Click here for more video options](#)

### CONTACTS



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# For More Information on SP

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**Kellen Mahoney, Program Manager**

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# **Alianza Verde Automotriz**

## **Concept Paper**

**Alejandro Sosa**  
**Navista Mexico**

**7 December 2011**  
**Mexico City, Mexico**



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# Vision

Create a private sector leadership organization that will provide automobile original equipment manufacturers and their suppliers the opportunity to address new, innovative and voluntary environmental sustainability projects and activities that will improve environmental performance while providing value throughout the automobile supply chain in Mexico and that the Mexican Government will be an honor witness to the project.





# Mission

Create and provide tools, identify and support synergies through collaboration and cooperation, and provide competitive advantage through projects and activities that will provide economic and environmental value throughout the automobile supply chain for issues identified by participants within Alianza Verde Automotriz.





# Key Issues

- Water Use and Availability
- Energy
- Recycling and Resource Creation





# Next Steps

- Agree on direction, vision and mission of Alianza Verde Automotriz
- Agree on key issues to be addressed in 2012
- Organize three Work Groups: Water Use and Availability; Energy; and, Recycling and Resource Creation
- Conduct conference calls of Work Groups in first quarter of 2012 and develop Work Group agendas on project that can be completed and value identified by June 2012



# **Alianza Verde Automotriz**

## **Water Use and Availability**

**Luis Lara**  
**Ford Motor Company**

**7 December 2011**  
**Mexico City, Mexico**



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# **Alianza Verde Automotriz Energy**

**Arnulfo Berlanga  
General Motors Company**

**7 December 2011  
Mexico City, Mexico**



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# **Alianza Verde Automotriz**

## **Recycling and Resource Creation**

**Delia Rivas**  
**Chrysler Mexico**

**7 December 2011**  
**Mexico City, Mexico**



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# **Alianza Verde Automotriz Facilitated Discussion**

**Steve Hellem and Alejandro Sosa  
Navista**

**7 December 2011  
Mexico City, Mexico**



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