



Advancing the shift of global commercial transportation to natural gas and hydrogen.



## Westport Innovations Inc.

*Faster Freight – Cleaner Air: A Summit on North American Goods Movement & Air Quality*

February 26, 2008 – On-Road/Trucking Track

Dr. Michael Gallagher, President & Chief Operating Officer  
Innovative Technologies & Programs – On-Road/Trucking



## Westport Innovations Inc.

- Recognized as a world leader in gaseous-fueled engine technology (CNG, LNG, Biogas, LPG & H2)
- FY2007 Revenues: C\$60.5 million (to March 31, 2007)
- Market Cap US\$280 million, ~250 employees

Deloitte. 2006  
Technology Fast 500

#2 Fastest Growing in North America

Deloitte.  
Technology Fast 50

#1 Fastest Growing in Canada



Creating a Better World Through Innovative Energy Solutions.



# Cummins Westport Joint Venture



Cummins Westport Inc.: 50:50 global JV with Cummins, Inc. formed March 2001:

- ~ 20,000 engines in service globally
- Over 50 OEM suppliers include Cummins Westport engines
- New ISL G meets 2010 CARB & EPA standards
- Economic lifecycle cost advantage



**ISL G**

**Stoichiometric EGR technology**

250 to 320 hp

**2010 Emission met in 2007**  
EPA 2010 & CARB certified



*Creating a Better World Through Innovative Energy Solutions.*



# Westport & Cummins Westport Global Operations, Customers & Supply Chain

Vancouver, BC ♦ Columbus, IN ♦ Beijing, China ♦ Los Angeles, CA



*Creating a Better World Through Innovative Energy Solutions.*



# Accomplishments since FFCA 2007

- ✔ 119 LNG HD trucks assembled to date
- ✔ Inland Kenworth and Cummins Cal Pacific expanding dealer upfit capacity
- ✔ Launched Australia trucks in October 2007 - 100,000 km to Dec 31/07
- ✔ Kenworth/Paccar to begin producing factory OEM LNG trucks for North America 2009
- ✔ Secured Certification CARB/EPA for 0.8g NOx for NA (Nov 2007)
- ✔ Secured SCAQMD, LA/LB Ports, CEC 2010 technology funding \$2.25M
- ✔ Established Westport Assembly Center to ramp up LNG engine deliveries
- ✔ Wal-Mart to operate 4-truck demonstration supported by MDAQMD
- ✔ 1st Australia pre-order & Australia 2008 certification

*Creating a Better World Through Innovative Energy Solutions.*



# Notable Events in 2007



Alternative Fuels Vehicle Institute's Annual Innovation Award shared with WPT, Kenworth, Inland Kenworth & Clean Energy



Canadian American Business Council's Annual Business Achievement Award- WPT and Cummins



California Gov. Schwarzenegger and BC Premier Campbell with WPT executives and the CWI ISL G



WPT rolls out first LNG ISX trucks to support implementation of POLA/POLB CAAP Clean Trucks Program

*Creating a Better World Through Innovative Energy Solutions.*

# Why Alt Fuels & Natural Gas

- Motivators for all Alternative Fuels continue to grow:
  - Air quality
  - Energy Security
  - Climate Change
  - Energy Costs
- Natural Gas:
  - Domestic availability - proven supply
  - Clean burning
  - Low carbon
  - Cheaper than diesel
- Technology is here today & advancing significantly

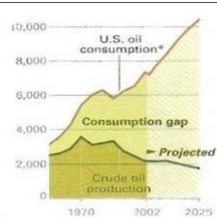
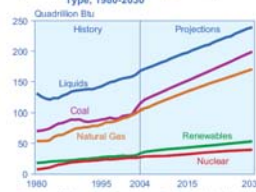


Figure 11. World Marketed Energy Use by Fuel Type, 1980-2030

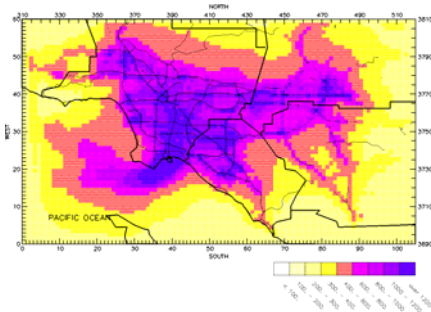


Sources: History: Energy Information Administration (EIA), International Energy Annual 2004 (May-July 2006), web site [www.eia.doe.gov/iles](http://www.eia.doe.gov/iles). Projections: EIA, System for the Analysis of Global Energy Markets (2007).

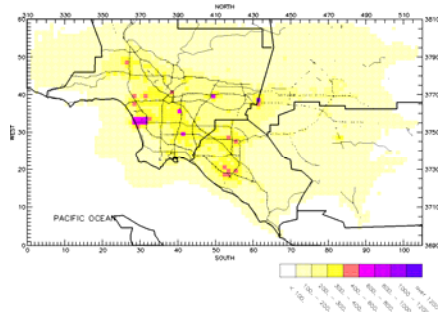
*Creating a Better World Through Innovative Energy Solutions.*

# Diesel Heavy Duty Vehicles: Los Angeles Basin

## Los Angeles Basin - Modelling of health risks from air toxins.



Current air toxin risk assessment



After elimination of diesel sources

Source: South Coast Air Quality Management District, Los Angeles (MATES II)

*Creating a Better World Through Innovative Energy Solutions.*

# Westport LNG Heavy Duty Trucks: Diesel Performance on LNG

- Tight geographic market focus
  - California, Texas
  - Ports of Los Angeles & Long Beach
  - First sales in Australia in 2007
- Production of "upfit" service in 2008
- Kenworth factory assembled T800 available in 2009
- Continued "upfit" production with other OEM compatibility
- Early adopting customers:



PROMETHEUSenergy

**Westport**  
INNOVATIONS INC.

News Release

**Kenworth to produce Liquefied Natural Gas Vehicles**  
Westport to supply LNG fuel systems through new assembly centre in British Columbia

FOR IMMEDIATE RELEASE – January 24, 2008

VANCOUVER, BC and KIRKLAND, WA – Kenworth Truck Company will expand its presence in the growing market for environmentally friendly, liquefied natural gas (LNG) vehicles by beginning production of Kenworth T800 LNG trucks at its manufacturing facility in Renton, Washington, in 2009. Under an exclusive agreement with Westport Innovations Inc. (TSX:WPT), Kenworth will use Westport's LNG fuel system technology adapted for the Cummins ISX-15-liter engine.



**Westport**  
INNOVATIONS INC.

**LNG System for Heavy-Duty Trucks**



click to visit:  
<http://LNGtrucks.westport.com>



*Creating a Better World Through Innovative Energy Solutions.*

# GHG Reduction

- **LNG Fuelled trucks can have a significant impact on fleet Green House Gas (GHG) emissions levels:**
  - 20% lower GHG than equivalent diesel engine
  - Equivalent to:
    - 28 tons per year per truck
    - 224,000 tons per year for 8000 LNG trucks

*Creating a Better World Through Innovative Energy Solutions.*



# Westport LNG Heavy Duty Trucks: San Pedro Bay Ports Clean Truck Superfund- \$1.6B

## Clean Air Action Plan (CAAP)

- Plan aimed at significantly reducing the health risks posed by air pollution from port-related operations
- Approved \$27.5M for 1st 158 WPT LNG trucks Oct 07
- Full Program- 16,800 old diesel HD trucks to be replaced by January 2012
  - Nov-Progressive ban of older diesel trucks beginning Oct 2008
  - Dec-US\$1.6 billion for clean trucks



### Port Seeks Proposals for LNG Truck Program



The Port of Los Angeles is seeking proposals to purchase and integrate LNG-powered trucks into fleets involved in Port drayage. The Port of Long Beach is releasing a parallel RFP seeking proposals to design, construct and operate a public LNG fueling and maintenance facility on Port of Los Angeles property. > Learn More.

### BEACH, Calif. - June 28, 2008 - Taking an unprecedented step in the South Coast Air Basin, the ports of Los Angeles and the San Pedro Bay Ports Clean Air Action Plan, a significantly reducing the health risks posed by air pollution from ships, trucks, terminal equipment and harbor craft.



Creating a Better World Through Innovative Energy Solutions.



# Kenworth and Westport

- January 24, 2008 – Kenworth Truck Company and Westport announce agreement to mass produce LNG trucks
- Kenworth will go into production of Kenworth T800 LNG trucks at its manufacturing facility in Renton, Washington
- WPT to open LNG Fuel System Assembly center in British Columbia
- Dramatic increase(10X) in our capacity to deploy HD LNG trucks- can do 5000 within 24 months of new order commitments and 10,000 within 36 months



Creating a Better World Through Innovative Energy Solutions.

# We are producing Trucks for North America (and Australia)



*Creating a Better World Through Innovative Energy Solutions.*

**Thank you**

[www.westport.com](http://www.westport.com)