Geothermal Technology: A Best-Kept Secret In Achieving Energy Independence

Mike Mansuetti, President, Robert Bosch LLC
Eco-Friendly Solution
Best-Kept Secret

- Power, consistency and longevity
- Reduce energy bill up to 70 percent
- Payback in just 5–7 years on some systems
The Right Elements

✓ Right technology

✓ Knowledgeable individuals

✓ Know the demographics

✓ Trade association
Bosch Thermotechnology Division
Invented for life

Automotive Technology

Industrial Technology

Consumer Goods and Building Technology
2011 Key Bosch Figures

**Bosch Group**
- $72 billion in sales
- 300,000 associates

**North America**
- $9.8 billion in sales
- 22,500 associates
Values-Based Foundation
Enablers to Maximize Potential

Long-Term Strategy

Diverse Product Portfolio

Globalization
Long-Term Strategy

Long-Term Gains
Quick Decisions
Profitable Growth
Sustainability
Values
Innovation
Continued Investment in R&D

R&D Costs
Millions of Euros

- '07: 3,500
- '08: 3,700
- '09: 3,800
- '10: 3,900
- '11: 4,190

R&D Costs
Percentage of Sales

- '07: 7.5%
- '08: 8.2%
- '09: 8.5%
- '10: 8.0%
- '11: 8.1%

Includes development work charged directly to customers
Diverse Product Portfolio
Bosch Experience Center and Eco Plus Home

**Bosch Experience Center**

- Experience Center with functioning demonstrations of:
  - Geothermal heating and cooling system
  - Solar thermal water heating system
  - Solar photovoltaic system
  - Energy-efficient home appliances
  - Security and sound systems
  - Power tools
  - Structural materials
  - Automotive clean diesel
- Location: Community of Serenbe, 30 minutes SW of Atlanta Airport

**Eco Plus Home**

- Net Zero home built for the typical family
- Location: Bathurst, New Brunswick
- Active Systems:
  - Geothermal
  - Solar thermal and solar photovoltaic
  - Ventilation with heat recovery unit
  - Energy-efficient appliances
  - Controls and energy monitoring
- Passive Systems:
  - High building sealing (R2000 standard)
  - Passive energy gains
  - High-efficiency basement insulation
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