Investing in the Panhandle of Texas – Investing in the Future
Combining Conventional and Renewable Fuels
The Sunray Wind Farm
Valero’s Debut Into Wind Energy

• Sunray Wind – wholly owned subsidiary of Valero Energy Corp
  • Project consists of 33 GE wind turbines
  • Each turbine rated 1.5MW – 49.5MW total
  • Sufficient production to power 8900 homes
  • 15 MW sold to utility – remaining electricity will be used by refinery to supplement power purchases
  • Project was sized with capacity just less than the minimum historical consumption of the refinery – goal is for no exporting of power onto the transmission grid

• The location at McKee Refinery was selected for its excellent wind resource, availability of land, fewer environmental impacts, highly qualified work force, and good working relationship with local utility
  • Competed against four other locations both domestic and international
  • Wind Capacity Factor - 42%
  • Wind Above Min Threshold – 92%

The Central Hub of These Wind Turbines Sits 262 Feet Above The Foundation
The McKee Refinery Sits In One of The Best Wind Resource Areas in the Country

Sunray’s wind resource is estimated to be in the 4 to 4.5 classification, which is highly productive for wind farm development.

Source: State Energy Conservation Office Website

Source: NREL Website
Perfect Marriage – Conventional & Renewable

• Refinery – large consumer of electricity
  – Push to diversify fuel portfolio
  – Wind energy is most cost effective and commercially proven renewable energy technology
  – Project analysis indicated an acceptable rate of return and met or exceeded our cost of capital

• Energy production from Sunray is expected to generate 26% of the McKee refinery’s electrical energy requirements
  – When the wind reaches 32 mph, turbines reach full production, or 70% of the refinery demand

• Benefits
  • Free Power after initial capital investment
  • Reduces exposure to volatile fuel markets and electrical price swings
  • Renewable resource - Fed and State incentives to make wind energy competitive with fossil fuels

Wind Energy – Many Years of Commercial Operation
Sunray Wind Now In Full Operation

• Project development and construction
  – Normal project cycle – 3 to 5 years
  – Major road blocks to fast track project:
    – Std turbine delivery – 2 to 3 years
    – No historical wind data available near site– 12 month study required to establish wind capacity factor
    – Interconnection studies required by regional grid operator and local utility
    – Transmission line gridlock
    – Tight construction market – PTC expiration looming on December 2008

• On time and under budget
  – Accepted early delivery of turbines
  – Project critical path - electrical infrastructure
  – Original completion date Sept 2010
  – Full production – 26 months

Fast Track Construction Schedule

Entrance to Wind Farm
Tight Project Schedule

- Project milestones
  - 6/2007  Began project concept development
  - 9/2007  Contracted a commercial developer
  - 12/2007  Decided to “go it alone”
  - 2/2008  Purchased turbines
  - 6/2008  Began project design
  - 8/2008  Contracted construction contractor
  - 9/2008  Began Construction
  - 11/2008  Received first turbines
  - 12/28/2008  First 6 turbines in service
  - 3/2009  Received final turbines
  - 8/2009  Electrical substation completed, full production

Accepted Early Delivery of Turbines
Tax Issues

- Production Tax Credit
  - Originally due to expire in Dec 2008 but was extended.
  - Required a third party sale
- Investment Tax Credit
  - Allows us to self serve and still receive tax credit – not as favorable
  - First 10 turbines completed prior to change in law, so output is being sold to the utility.
- Attractive investment vs refinery expansion
  - Less risk – lower required return
  - Valero is looking to reduce carbon footprint
  - Breaking new ground for the refining industry
  - Others are looking at similar projects

Wind Resources of the Panhandle Make the Region Ideal for Development
Questions?
Thank You For Your Time