Dow Energy Business

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Hydrocarbons & Energy

Low-Cost Integration that Fuels Dow’s Competitive Advantage

Raw Materials

- GAS
- OIL
- MINERALS

- Silicone
- Nitrogen
- Propane PDH
- C3/C4
- Ethane
- Naphtha/Gas/Oil
- Other

SOLUTIONS

Packaging
Infrastructure
Consumer
Fuel, Steam, Power & CO₂ Inextricably Linked

Must Consider Each Factor to Optimize

Color Key for Graphic

FUEL ♦ STEAM ♦ POWER ♦ EMISSIONS

Traded markets have volatility

Fuels, Power, and Emissions

Companies have choices

- Operate assets (i.e. Gas Turbines, boilers)
- Purchase
  - Grid
  - PPA’s (Power Purchase Agreements)
  - Third party providers
Technical Aspects of Grid Design Matter to Industrials

Renewables + Co-Gen = Steady Power

Key Statistics for Dow Assets in Texas

- Renewable intermittency and peak load variability

July 2017 Delivered MW to Dow Users in Texas

Industrial Processes Operate Continuously
Petrochemicals Rely on Advantaged Feedstocks

Optimizing Cost Fuels Profitability

Feedstocks Realities

• Chemical companies convert low-cost feedstocks into valuable materials
• Assets are built in the best (affordable, abundant) resource locations
• Feedstock flexibility is deployed to optimize economics
• Feedstocks can be bio-based, gas-based, oil-based or brine/rock, plus power
• It’s hard to capture value for “green” attributes – today

Dow skillfully casts its net to capture low cost …
Dow is inspiring hope with innovative solutions for smart and responsible plastics use, reuse, repurposing and recycling.

- No plastics in the environment
- Drive a circular economy
- Increase impact through partnerships
PullingOurWeight - 55 clean-ups in 2018
- 5,600 people
- 52,500 pounds less waste

Dow’s RecycleReady Technology
A way to create flexible packaging that can be easily recycled through existing PE film recycle streams

Hefty® EnergyBag® Program & Grants
- Innovative curbside energy recovery program for hard-to-recycle plastics
- 3 Metropolitan areas & growing
- 283 Tons of plastics diverted from landfills for energy recovery since 2014

Helping to Start a Movement for Change

Part of the Solution – Examples

Repurposing Used Plastics
Transforming flexible plastic waste into longer lasting roads with environmental benefits – and durable bricks/building materials
Collaborating for End-of-Life Solutions for Plastics
Collaboration, Transparency and Knowledge Needed

- Energy and Sustainability are fundamental to the wealth, health and happiness of humanity
- Plastics and chemicals provide essential solutions for packaging, infrastructure and consumer needs
- Dow is an Industrial leader in value-driven energy management and cleaner energy use
- We drive vital engagement aimed at lower carbon solutions
- Urgent need for technically trained, creative and collaborative talent
Thank You