Chevron Phillips Chemical Company’s Business Strategy for Sustainable Growth

Vision – To be the premier chemical company achieving superior financial results while protecting people and the environment.

Strategy – Grow profitably with sustainable competitive advantage and operational excellence to continuously improve the value created for our shareholders, customers, employees and communities.
Programs and Practices

• Adoption of Life Saving Rules to compliment an Operational Discipline focus
• Asset Integrity and Reliability Organization
• Engaging our employees in creating a great place to work
• Diversity and Inclusion initiatives
• Construction of our US Gulf Coast Petrochemicals Project
• Completed startup of the worlds largest on-purpose 1-Hexene plant
• Engaging with industry associations to address regional and global issues
• Communicating with stakeholders to assess sustainability performance
Performance Examples

Employee Performance vs. ACC Member Companies

- CPC Global
- ACC Top Quartile
- ACC Top 10%
- ACC Best
One Example of Plastics Sustainable Value

Common Plastics Packaging Helps Reduce Package Weight, Energy Use and GHG Emissions in U.S.

<table>
<thead>
<tr>
<th></th>
<th>Substitute Packaging</th>
<th>Plastic Packaging</th>
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<tbody>
<tr>
<td><strong>Total Weight</strong></td>
<td>70.7 Mil. tons</td>
<td>15.8 Mil. tons</td>
</tr>
<tr>
<td><strong>Cumulative Energy Use</strong></td>
<td>2,466 Bil. MJ (Mega Joules)</td>
<td>1,357 Bil. MJ</td>
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<tr>
<td><strong>Global Warming Potential</strong></td>
<td>134.4 Mil.Metric Tonnes CO₂ eq</td>
<td>58.6 Mil. Metric Tonnes CO₂ eq</td>
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**Savings**
- Plastic Packaging: 54.9 Mil. tons (199.8 Bil. lbs.)
  Substitutes = 348% higher than plastics
- Energy Use: 1,110 Bil. MJ
  Substitutes = 62% higher than plastics
- GHG Emissions: 75.8 Mil. Metric Tonnes CO₂ eq
  Substitutes = 129% higher than plastics

This study measures energy use and GHG emissions and is not an ISO 14044 life cycle assessment.
The 4 R’s of a Products Sustainable life

- Reduce
- Reuse
- Recycle
- Recover

Resource Impact

Waste

Resource Loss
Vision for Plastics Recovery

**Plastic Production**
- Fabrication
- Use
- Post-use collection
- Recycle
- Feedstock recovery
- Energy recovery

**Fuel, Power & Other**
- Natural gas
- Oil
- Biofuels

**Energy**
- 97%
- 3%
Vision for Plastics Recovery

- Natural Gas & Oil: 97% Fuel, Power, Other, 3% Other

- PLASTIC PRODUCTION

- FABRICATION

- USE

- CONSUMER REUSE

- POST-USE COLLECTION

- FEEDSTOCK RECOVERY

- ENERGY RECOVERY

- ENERGY RECOVERY
Why isn't it Easy to Recycle and Recover?

- Recyclables need to reach sorting facilities in a consistent quality and volume
- Products need to be economically sortable
- Contamination in sorted materials is equal to lost value
- More contamination leads to higher processing cost
- Use of recycled material hinges on the ability to supply it in a consistent volume and quality
Why isn't Packaging Easily Sorted and Consistent in its Make up?

- Package design has many parameters
  - Product protection
  - Brand identification
  - Consumer preference
  - Regional environmental conditions
  - Regional regulations
  - Stacking Requirements
- Plastics conversion into a finished product has many options
  - Conversion type
  - Conversion equipment capabilities
  - 12 families and 1000’s of plastics to choose from to meet the packaging design’s need
Paths to a More Sustainable Plastics Future

- Analyze applicability of all 4 R’s
- Support education about beneficial use and disposition across the lifecycle of your products
- Support recycling and discussion of infrastructure requirements
- Support recovery where it makes sense
- Improve automation and sorting technologies
- Find paths to recover materials like EPS and PVC
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