Making Butanol “Greener”
Major Energy Reductions through Strategic Product Management

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Manager, Global Natural Resource Management
A global industry leader

• Fortune 500 specialty materials company with 2018 revenue of ~$10B
• Global manufacturer and marketer of advanced materials and specialty additives
• Operates four business segments
• Global team of ~14,500
• Serving customers in >100 countries
Sustainability matters. The value we create as a company must vastly exceed the resources we use.

“Sustainability matters. The world faces enormous challenges, but I’m confident in Eastman’s ability to address them through strategic collaboration, responsible resource management and persistent innovation.”

– David A. Golden,
Senior Vice President, Chief Legal & Sustainability Officer, and Corporate Secretary
Further purification requires 211% more energy!!

Only 11% of the customers required the higher purity product.
How we got there – Embracing Complexity

What can we do to get around it?
- Purer Feed?
- Higher Efficiency Refining?
- Increase Inventory Capacity?
- Embrace Logistical Complexity?

Butanol Process

Raw Materials

Energy Used to Produce

Eastman™ High Purity n-Butanol

“Green” n-Butanol

Eastman™ n-Butanol
Conclusion

- Relentlessly Engaging the Market led to an understanding of Butanol demand
- Embracing Complexity led to us being value oriented as opposed to veering from the difficult path

- Bypassing the final refining column to create a new product
- Cost Savings of $709k / year
- Total Energy Savings: -42%

Butanol Process

Raw Materials

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“Green” n-Butanol

Energy Used to Produce
Questions?