

### October Section Meeting: Replacing Charcoal-Burning Cookstoves with Ethanol Stoves to Improve Human Health and Slow Deforestation in Africa

Throughout Africa, more than 80% of urban families buy charcoal to cook their food, a commodity that is increasing in price as forests retreat, in a market now estimated to be worth more than \$10 billion “deforestation dollars” per annum. In Maputo, the capital of Mozambique, charcoal prices have doubled over the last 3 years. According to the World Health Organization, inhaling charcoal smoke has the health impact of smoking two packs of cigarettes per day, and the organization estimates that indoor air pollution from solid fuel use, including charcoal, causes almost 2 million deaths annually. In a country with an average annual income of \$500 and over 50% poverty, CleanStar Ventures, Novozymes and Industrialization Fund for Developing Countries (ICM) teamed to tackle poverty, health and deforestation.

In early 2012, industrial components shipped from the US by ICM were integrated into a 0.5 MMGY 190 proof fuel ethanol facility in Sofala Province, Mozambique. In October 2012, the facility entered startup with support from ICM startup specialists and a few volunteers from the US ethanol industry. Arriving on November 18th, 2012, Amanda Huber was the first volunteer and, over the course of her stay until December 3rd, the facility was run in halves, the process destroyed about 1/2 the pumps in the facility, and a trip was needed to South Africa to

*(continued on page 2)*

### October Section Meeting

**Topic:** Replacing Charcoal-Burning Cookstoves with Ethanol Stoves to Improve Human Health and Slow Deforestation in Africa

**Speaker:** Amanda Huber

**Date:** Tuesday, October 15th

**Time:** 6:00 Social Time  
6:45 Dinner  
7:45 Presentation

**Location:** Bisetti’s Ristorante  
120 S. College Avenue  
Ft. Collins  
970-493-0086

**Cost:** Members: \$20  
(w/RSVP)\* Non-Members: \$25  
Students & Unemployed: \$10

**Please RSVP by FRIDAY, October 11<sup>th</sup>**, indicating your name, phone number, and number of attendees. Please RSVP at [rockyaiche@yahoo.com](mailto:rockyaiche@yahoo.com).

\*Add \$5 for attending meeting without RSVP

(continued from page 1)

obtain simple parts such as 1" elbows and ball valves as the local hardware store supplied not much beyond Teflon tape in this unindustrialized nation.

Amanda has been the Process Manager at Front Range Energy (FRE), a fuel ethanol production



facility in Windsor, since early 2006. Her role includes management of the lab and biological processes to convert a mostly corn feedstock to fuel ethanol and animal feed as well as new and advanced technology investigation and implementation. Prior to FRE, she started her career with Cargill Dow, now NatureWorks, working in both the pilot scale facility in Minnesota and the first corn plastic commercial facility in Nebraska. She holds a B.S. in Chemistry from The University of North Dakota.

## Rocky Mountain Section-AIChE Income Statement for the Past Two Program Seasons

Category Description	9/1/11- 8/31/12	9/1/12- 8/31/13
<b>INFLOWS</b>		
Advertising-Newsletter	75.00	0.00
Dinner Income	2,776.00	3,300.00
Dues Paid	2,710.00	2,585.00
Int Inc-Interest Income	54.77	17.08
<b>TOTAL INFLOWS</b>	<b>5,615.77</b>	<b>5,902.08</b>
<b>OUTFLOWS</b>		
CEC	200.00	0.00
Donations	600.00	350.00
Gifts-Gift Expenses	0.00	30.00
Meals	4,081.65	4,584.48
News Editor	400.00	900.00
Non-Profit Corp	10.00	10.00
Speakers	250.00	0.00
<b>TOTAL OUTFLOWS</b>	<b>5,541.65</b>	<b>5,874.48</b>
<b>OVERALL TOTAL</b>	<b>74.12</b>	<b>27.60</b>

## September 2013 Presentation after Tour of Merrick's MillerCoors Ethanol Plant



Mike Washer, Crystal Smalley, Pam Buzzetta, Ryan Caulfield, and Chris Johnson present a review of the MillerCoors Ethanol Recovery Plant Tour during our September presentation at Table Mountain Inn

### Students Corner

Welcome back to school everyone, I hope your studies are going well. RM has tried to incorporate tours into our professional section meetings, but I am looking for student input for a student tour this school year. Please send ideas!

In the meantime, enjoy some jokes:

- 1) Why do chemists like nitrates so much?
- 2) If H2O is water what is H2O4?

Just remember.....old chemical engineers never die, they just fail to react.

For those nearing graduation and looking for volunteer activities, Rocky Mountain is lacking a Young Professional (YP) section. However, RM local section has aligned with AIChE strategic goals over the last few years, we are excited to provide support for this aspect of the institute. I can attest that getting involved has been one of the most rewarding aspects of my engineering career. Please connect with me if you are interested and check out this link for more information; <http://www.aiche.org/community/young-professionals>.

Cory Jensen

Answers to jokes:

- 1) They're cheaper than day rates.
- 2) Drinking, bathing, washing, swimming. . .

## AIChE Meetings

### 2013

Oct 21-23	Carbon Management Technology Conference Hilton Alexandria Old Town Alexandria, VA
Oct 24	Carbon Management's Effect on Water Stress Workshop Hilton Alexandria Old Town, Alexandria, VA
Nov 1-5	2013 Annual Student Conference Hilton Union Sq San Francisco, CA
Nov 3-8	2013 AIChE Annual Meeting Hilton Union Sq San Francisco, CA
Dec 10-12	2013 AIChE Northeast Manufacturing Conference at the ChemShow Javits Convention Center New York City, NY

### National AIChE Contact Info

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The objectives of AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members, and to serve society, particularly where chemical, engineering can contribute to the public interest.

### Rocky Mountain AIChE News Publication Schedule

November 2013 issue

Articles due Wednesday, October 29<sup>th</sup>

Publish on Friday, November 1<sup>th</sup>

Meeting on Tuesday, November 12<sup>th</sup>

### MEETING SCHEDULE

*The Rocky Mountain District of AIChE generally meets the third Tuesday of every month, September through November and January through May.*

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this newsletter electronically!*



**DIRECTIONS:** From Denver, drive north on I-25 towards Fort Collins. Take exit 269B, CO-14 W/E Mulberry St toward Ft Collins. Drive 4.2 miles and turn right onto S College Ave/US-287 N/CO-14 W. Drive about 0.3 miles and look for Bisetti's Ristorante on the right.