Moving from BAD -> Through CONFUSING -> To GOOD!

Evolution



in





Recreation

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The Backstory

i.e. How did we get here???

• 1942 – Coleman invents the GI stove – single burner, 5K btu, gasoline fueled. 1 million units ship to US soldiers in Europe & Asia.





• 1946 - 1970 — Camping goes mainstream - Coleman sells millions of 20k btu, 2-burner gasfueled stoves to American families.





 1970 – present – Propane replaces white gas as the dominant recreational equipment fuel (for stoves, lanterns, etc.) & disposable cylinders emerge as an HHW headache...





The Present Day i.e. Where are we now???

- National Park Service reports record overnight visitation of 15+ million visitors in 20151
- CA State Parks report over 7 million camping visitors in 14/15 FY (up 3.9% from 13/14). 2
- Worthington Industries of Columbus OH reports 48.9 million units shipped of consumer product cylinders (disposable LP & helium) 3
- American taxpayers get saddled with the environmental and financial consequences.







Where do the tanks go? What does it cost??

Their path to recycling has serious obstacles.

An unknown % end up in landfills as trash.

- Used tanks (HHW) are difficult to recycle.
 - Used doesn't mean empty = hazardous
 - Many are left as trash in parks & rec facilities
 - Work-around solutions are common.
- Recycling cost per cylinder includes
 - Collection labor
 - Processing (gas extraction & tank ventilation)
 - Storage & Transportation
- Recycling costs between \$1.50 to \$3.50 /tank
- Scrap value is approximately \$0.12 per tank
- Yosemite collected over 24,000 in 2014.











Sunnyvale MRF Fire March 2015

30 Tons of baled cardboard burned!

Caused by small propane or flammable aerosol container in the baler – sparked the fire.

16,000 cylinders processed at Sunnyvale MRF from 2010-2013 costing over \$144,000!



But wait, this get more interesting...

Disposable tank volume is increasing.
Environmental objections are growing.
Surely there's a solution to this problem?

Could it be... Site-based cylinder processing!

- Safely evacuating tanks
- Capturing unused gas
- Crushing tanks for recycling

What does it cost & who pays?

Private vendors or public employees

\$125,000 in cap ex + op ex!

Now sold by Worthington Industries!



2013 1lb refillable cylinders Enter the US marketplace

2 companies introduce refillable 1lb tanks.

Manchester Tanks (Franklin TN) \$\$\$

- Equipped with an external shutoff valve
- Ideal for motor fuel & contractor applications
- Outdoor power (mowers/blowers) & torches

Flameking / YSN Enterprises (China) \$

- Equipped with an internal liquid level indicator valve
- Ideal for recreational applications
- Camp stoves, lanterns, heaters & BBQ's



And then? Start the marketing & outreach!

In 2014, 2 forces aligned in CA

Kamps Propane introduces the Little Kamper

- Using the Flameking 1lb refillable cylinder
- Offering sales & cylinder exchange at 12 locations
- \$12.99 sale (prefilled) and \$1.99 exchange



- CPSC initiates campaign representing 5 service areas
- Events, retailer recruiting and targeted marketing promote RYF
- Small victories lead to bigger opportunities
- University Rec programs start at CSUS, Stanford & UCSC















Enter the National Retailers!

2016 has been a break-through year as our market outreach brings national retailers on board!

Tank sales & on-demand refilling

- Uhaul \$12.95 sale (filled) and \$1.95 refill
 - America's highest volume LP retailer
 - 120 locations in CA alone 7 days a week

Tank Sales only

- REI The US leader in adventure retail \$14.95
- West Marine maritime retailer \$17.99
- Home Depot home improvement \$13.97



AWESOME!





West Marine

But there's a complication!

LP is a hazardous material.

- It boils and vaporizes at -44°.
- Contact with skin results in serious burns
- 1 cu ft LP = 270 cu ft of propane vapor
- Transferring LP from one container to another is dangerous & REQUIRES TRAINING
- Flameking is marketing a refill kit
- The potential for an accident is significant





So what's next?

- The refillable tank marketplace (doors) is growing.
- Sales volume (units) is increasing.
- Refill locations are increasing (pumps)
- How can we encourage refillables and proper disposal?
 - How do we increase the diversion of disposable tanks into recycling channels?
 - Make it a permit requirement for parks to sell/refill?
 - A standardized collection system?
 - A standardized statewide public education campaign?
 - Producer responsibility?
 - Other ideas?

THANKYOU!

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