

**“Economics of Technology:
Remote
Tank Monitoring”**

Dealer Forum Presentation

By: R. L. Humphrey

Friday, June 5, 2009

**Propane Gas Association of Canada
2009 Annual National Convention**

Sponsored by:



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Westin; Ottawa, Ontario Canada**

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**NORTH AMERICAN SATELLITE CORPORATION
("NASCorp")**

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----- Proceed to podium with camera. Silently arrange materials (Presentation Binder, Note Cards & Power-Point). Ask audience to please put their **cell phones and small children on vibrate!**

Then, picking up camera, step away from podium, announce that you are "**Focusing on your "Target Audience"**" and take the audience's "**PICTURE**"; stating that "**that was something you always wanted to do and to do it to beat anyone else to the punch; anyone in the audience taking a picture of the speaker.**" -----

"Thank you Ann Marie, Jack, Linda, Pierre, PGAC staff and members. It really is a pleasure to be part of your Association and guests in your country. It is always a pleasure and a joy to do so. It is just like going into your attic. We in the states sometimes forget you are up here, but when we come, we are reminded of all the memories and find all kinds of neat stuff.

One of our Account Executives, who works with dealers in Australia and Canada, says he has the best job; working with the "Land Down-Under" and with the "People Up-Over."

I continually marvel at your knack for blending development with the natural beauty that Canada is so richly blessed with. Over my lifetime, I have visited Canada on dozens of occasions and have driven/traveled --- at one time or another --- every inch of the Trans-Canada Highway, the Yellowhead Highway 16, the Icefields Highway, QEW and places like Waterton Park, Banff, Kananaskis, Vancouver Saskatoon, PEI and the Maritime Provinces to the Yukon. I have enjoyed every single visit and look forward to many more.

If it were us, we would have condos built up to the Victoria Glacier and 7-11s in place of the Prince of Wales. But, I agree with Dawnie last night. Canada's and the PGAC's real resource is its **people!** We regard you as our closest friends and want to thank you for being here.

North American Satellite Corporation ("NASCorp") appreciates this opportunity to present this educational seminar and to be a part of your convention. **Linda Kool, Manager; Member Services,** of the Propane Gas Association of Canada, contacted me last fall and asked me to come before you today at this appointed time to speak to you. Of course, with no hesitation whatsoever, I told Linda that I would. Then I thought, "What am I going to tell you?"

Well, the first thought that came to mind was to tell you that a picture is worth a thousand words and that I intend to use both! Those of you who know me know that this is true and, as you can see, I intend to do just that. But, since we are in a business setting of finance and economics, I thought that a story about a banker, a loan-officer and Mick Jagger's son might also be somewhat appropriate. **It goes like this:**

One day Chris Jagger went to his father's bank to take out a loan. He was cordially greeted by the bank's receptionist, then directed to the loan department where loan-officer Patty Whack proceeded to fill out a loan application for Chris. During the loan application process, several questions were asked of Chris; next of kin, other personal identification, citizenship and finally, what collateral he had to pledge against the loan. An embarrassed Chris Jagger had to admit to loan-officer Patty Whack that he had fallen on hard times and had to sell everything that he owned except for some gifts bestowed upon him by the Propane Gas Association of Canada at their recent Annual Conference. He stressed that he really needed the money and that he was to begin working for his dad on an upcoming cross-country tour, so he would be able to pay the bank back with interest.

Well, Patty Whack said to Mr. Jagger that she would have to have higher approval, so Patty Whack went to the bank President. There, Patty Whack explained;

“Chris Jagger needs a loan but has no collateral except some gifts given to him at the recent Annual Conference of the Propane Gas Association of Canada. But, he states, he is going on tour with his dad so he has potential earnings, but these gifts do not qualify as collateral. What should I do?”

Without hesitation, the bank President told Patty Whack:

“It's a knick-knack, Patty Whack – give the man a loan. His old man's a Rolling Stone.”

Well, I guess we better conduct some business, so the third thought that came to mind was to provide you with some ideas on new technologies and the economics you need to consider when deploying those technologies. Specifically, **Remote Tank Monitoring**.”

I am going to talk to you about eliminating a quadrillion or two of those “Delivery Possibilities” that Alicia was talking to you about just before I stepped up here; UPS's routing system. In fact, Remote Tank Monitoring does not compete with UPS. Instead, Remote Tank Monitoring enhances what the UPS system can deliver by adding the dimension of real-time tank levels; **but what really amazes me is that Alicia knows numbers bigger than President Obama. Quadrillions. Wow! Alicia, please don't tell him! He'll try them!**

Today, you have a number of remote tank monitoring choices. In fact, US PERC has identified 18 different companies in the world which offer remote tank monitors. Nine operate in North America. These are contained in a PERC report entitled “*Remote Tank Monitoring Matrix*.”

Basically, the various tank monitoring companies today purport to do one thing, monitor the liquid levels in your and your customer's tanks. Some do more than just report tank levels. They offer income streams for monitoring other things, too, like CO levels, propane leaks, low temperature, humidity, smoke detection, lighting or sprinkler control, etc.; you get the picture.

To send or transport this data, four methods are used:



The first is radio frequency or RF. RF transmission is limited to a distance between the length of a football field up to one mile, depending on how much interference you want to tolerate from foliage, cell towers, and the daughter's stereo. You either have to drive your truck within range of the signal (which is counter-productive) or you need to install a controller inside the customer's home to receive the RF signal, which then is re-transmitted by **land-line telephone, which is method number two**. Of course, a lot of people today no longer have land-line telephones. They use their cell phone, which is data **transmission method number three**.

The fourth and newest transmitters are satellite, which work much like DIRECTV, XM/Sirius Satellite Radios, and DISH Network, but off of a different fleet of satellites. Instead of bouncing signals off of high orbit geo-synchronous satellites around the globe at the equator, these systems use the Low Earth Orbital (LEO) satellites, otherwise known as Ground Positioning Systems (GPS). These birds eliminate rain-fade that you experience with your satellite television. They also eliminate having to install controllers in trucks or in your customer's home, which connect to your customer's power and telephone lines.

The bottom line, all of these systems work. It is your choice of transmission method you chose. All deliver to you, in different formats, your tank level information. So, the real question is economics to monitor your tanks. Accordingly, this session is entitled "**Economics of Technology: Remote Tank Monitoring.**"

Having been a propane marketer myself for 30 years and struggling with the same issues then that still face you today, I might have something that I can share with you. Over two dozen independent propane

dealers joined with me **ten years ago** --- and before that **Milfford Therrell of Squibb-Taylor** ---to help develop remote tank monitoring technology for this industry. Today we have seen hundreds of dealers adopt remote tank monitoring technology and deploy this technology successfully. Most vendors report similar interest, too, by this industry, **so timing is right for you and I to be here today.**

As always, marketers are trying to achieve and sustain efficiency in bobtail routing, gallons per stop, gallons per mile, customer retention, customer growth, sizing of customer storage, etc. It is the nature of this industry, but competition, increasing costs and a changing environment of new technology now makes it strategically imperative that you be able to effectively manage **performance, technology** and to **implement change.**

To begin, I used *LP-Gas Magazine's* recent *State of the Industry Survey*, as collected from propane distributor's. While the numbers used in this report are in US dollars and standard gallons, they can be applied to markets in Canada with typical monetary exchange rates or metric conversion(s). We do recognize that hydro-carbon prices in Canada generally exceed US retail charges, on BTU equivalence, **but the concept is overall the same between US and Canadian markets for Remote Tank Monitoring Technology applications.**

**Now lets show SOME "PICTURES" of what is contained in
Lp-Gas Magazine's Survey:**

What the Survey said:



What Retailers Say Their Customers Value Most:

- #1 - "Quick response to problems"
- #2 - "Dependable tank monitoring and refilling"
- #3 - "Flexible payment options"
- #4 - "Predictable prices"
- #5 - "Lower prices"

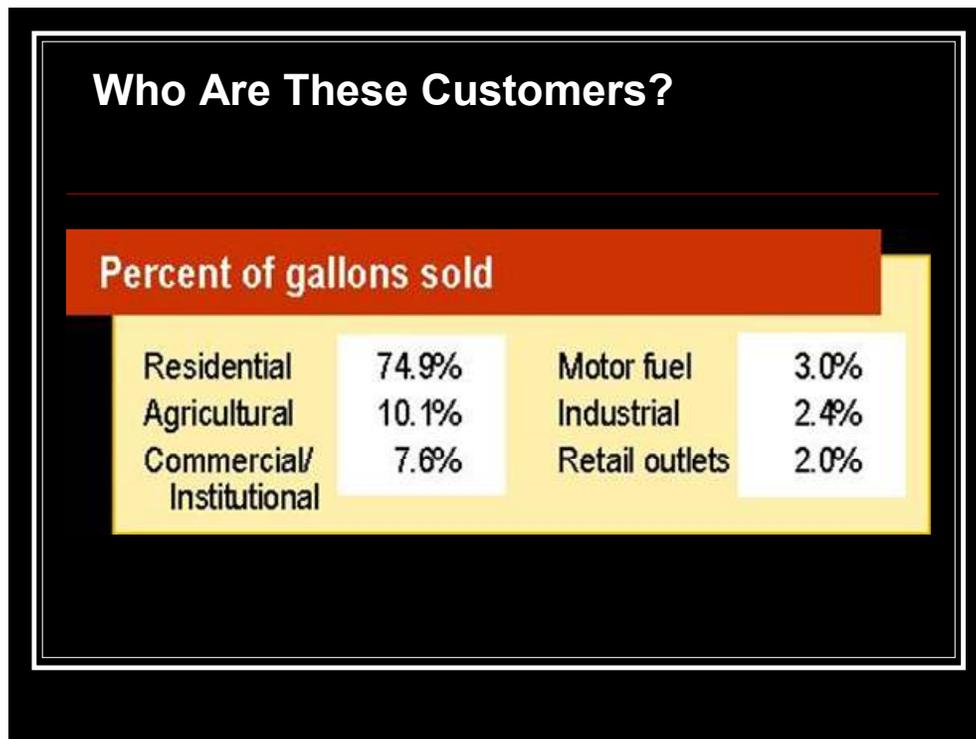
First, let's look at where the industry is today. According to a recent State-of-the-Industry Survey conducted by and reported in "Quick Response to Problems" topped the list of customer concerns. Dealers interpreted this, according to the Survey as a "Customer Loyalty" issue, Dependable Tank Monitoring and Refilling was second.

Loyalty comes from great relationships built with your customers; based on areas truly valuable to them.

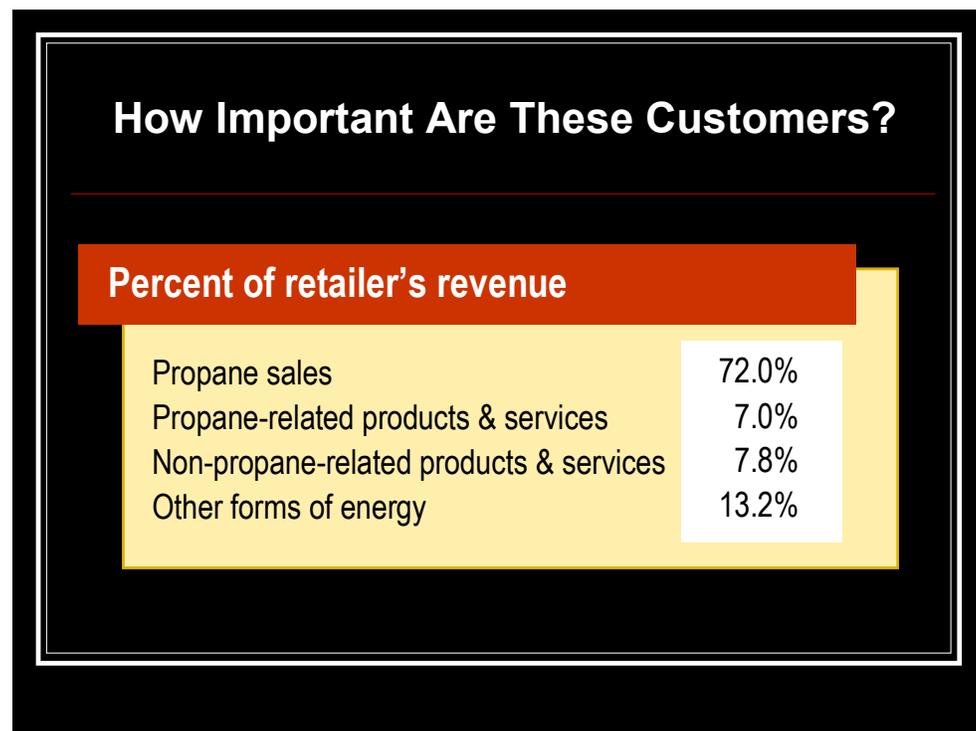
Dependable tank monitoring and refilling means a seamless, transparent service of your company's tank fill operations.

Now for economic justification to deploy remote tank monitors, lets look at a "PICTURE" of the Operating Cost of your businesses.

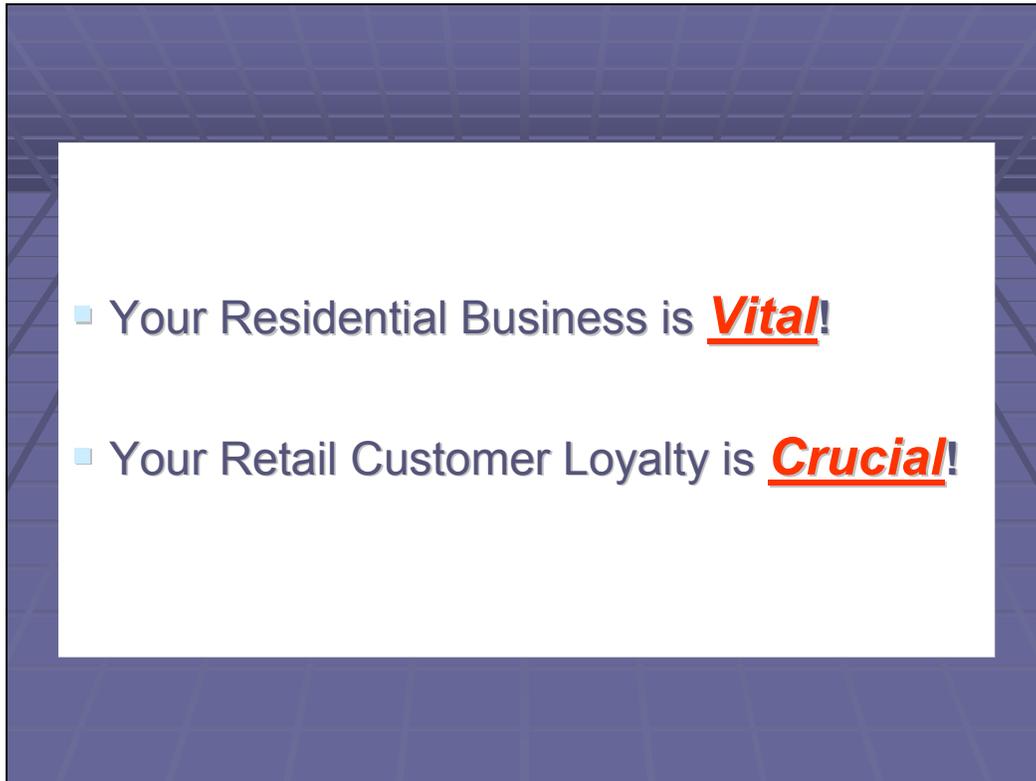
First, Who are your customers



Second, How important are those customers



In short,



Interestingly enough, low price was at the bottom of the survey and, while 74% of the survey's respondents believed that they lost customers due to price, the average loss was less than 1.0%. **So, in theory, the price you charge is controllable.** You can set your price as you see fit. But, being practical, the floor is determined by your cost, and the ceiling is dictated by your competition, unless you offer value added or other ancillary services that you can charge for, like tank monitoring. Simple enough, but not cheap, so let's look at how to **give the customer what the customer wants, but do it efficiently and effectively for you.**

Now, lets evaluate your delivery costs

Several different methods are being used today to calculate delivery costs. The most common is the "Cost Per Stop." The lowest "Per Stop" rate we have heard from dealers is **\$50.00 USD.** **Frankly, I believe this is what we used years ago, but for the sake of comparison, let's look at a "PICTURE" of it anyway.**

Profit on Delivery

(Assumes \$.50/gal. margin and \$50.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.50	\$50.00	\$50.00	\$0.00
200	\$.50	\$100.00	\$50.00	\$50.00
300	\$.50	\$150.00	\$50.00	\$100.00
400	\$.50	\$200.00	\$50.00	\$150.00

USD

Notes:

- i) Nothing is left for you with a 100 gallon minimum delivery
- ii) Still high. 300 gallon average/minimum deliveries you need to know when that event happens, but you only have 20% or less margin for error.

Profit on Delivery

(Assumes \$.60/gal. margin and \$50.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.60	\$60.00	\$50.00	\$10.00
200	\$.60	\$120.00	\$50.00	\$70.00
300	\$.60	\$180.00	\$50.00	\$130.00
400	\$.60	\$240.00	\$50.00	\$190.00

USD

Note: A 300 gallon deliver is better but only with a \$.60 margin can you clear \$100.00+ USD.

Using a \$.65 cent margin which, at the time of the Survey, was the average gross margin for the US, a 200 gallon delivery is far from profitable. 300 gallons is still the target.

Profit on Delivery

(Assumes \$.65/gal. margin and \$50.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.65	\$65.00	\$50.00	\$15.00
200	\$.65	\$130.00	\$50.00	\$80.00
300	\$.65	\$195.00	\$50.00	\$145.00
400	\$.65	\$260.00	\$50.00	\$210.00

USD

Profit on Delivery

(Assumes \$.80/gal. margin and \$50.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.80	\$80.00	\$50.00	\$30.00
200	\$.80	\$160.00	\$50.00	\$110.00
300	\$.80	\$240.00	\$50.00	\$190.00
400	\$.80	\$320.00	\$50.00	\$270.00

USD

Only with an \$.80 cent margin, can a 200 gallon delivery produce \$100.00 Gross Margin.

Profit on Delivery

(Assumes \$.65/gal. margin and \$50.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.95	\$95.00	\$50.00	\$45.00
200	\$.95	\$190.00	\$50.00	\$140.00
300	\$.95	\$285.00	\$50.00	\$235.00
400	\$.95	\$380.00	\$50.00	\$330.00

USD

“PICTURE” This: Due to the increased cost of operations over the last few years i.e.; motor fuel, labor, compliance, insurance, steel, etc., the most accepted “Cost Per Stop” quoted by companies is \$75.00 USD. So, using \$75.00 as your Cost Per Stop and applying that rate against varying per gallon margins, your profits would be:

Profit on Delivery (USD)				
Assumes \$.50/gal. margin and \$75.00 cost of delivery)				
Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.50	\$50.00	\$75.00	(\$25.00)
200	\$.50	\$100.00	\$75.00	\$25.00
300	\$.50	\$150.00	\$75.00	\$75.00
400	\$.50	\$200.00	\$75.00	\$125.00

Note: A 100 gallon delivery, you lost money. To clear \$100 USD an average of 350 gallons per stop is required at a \$75.00 cost per stop. To profit, you must know real-time tank levels before you go. Remember, not running out of gas is your customer’s number two concern. It is also yours and your insurance company’s as, according to the carriers, 85% of the industries’ accidents have occurred at times of out-of-gas situations.

Profit on Delivery (USD)

(Assumes \$.60/gal. margin and \$75.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.60	\$60.00	\$75.00	(\$15.00)
200	\$.60	\$120.00	\$75.00	\$45.00
300	\$.60	\$180.00	\$75.00	\$105.00
400	\$.60	\$240.00	\$75.00	\$165.00

Note: This is a little better with a \$.60 margin, but 100-gallon stops are still out.

Profit on Delivery

(Assumes \$.65/gal. margin and \$75.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.65	\$65.00	\$75.00	(\$10.00)
200	\$.65	\$130.00	\$75.00	\$55.00
300	\$.65	\$195.00	\$75.00	\$120.00
400	\$.65	\$260.00	\$75.00	\$185.00

Notes:

- i) You still lost money with a 100-gallon per stop average.
- ii) Even at a minimum average fill of 200 gallons, you only made \$55.00.

In case you did a little better gross margins than average, lets look at \$.85 and \$.95 margins.

Profit on Delivery (USD)

(Assumes \$.85/gal. margin and \$75.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.85	\$85.00	\$75.00	\$10.00
200	\$.85	\$170.00	\$75.00	\$95.00
300	\$.85	\$255.00	\$75.00	\$180.00
400	\$.85	\$340.00	\$75.00	\$265.00

USD

Profit on Delivery

(Assumes \$.95/gal. margin and \$75.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.95	\$95.00	\$75.00	\$20.00
200	\$.95	\$190.00	\$75.00	\$115.00
300	\$.95	\$285.00	\$75.00	\$210.00
400	\$.95	\$380.00	\$75.00	\$305.00

USD

If you think you are more cost-efficient than your peers, here is what profitability looks like using \$65.00 USD per stop:

Profit on Delivery

(Assumes \$.50/gal. margin and \$65.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.50	\$50.00	\$65.00	(\$15.00)
200	\$.50	\$100.00	\$65.00	\$35.00
300	\$.50	\$150.00	\$65.00	\$85.00
400	\$.50	\$200.00	\$65.00	\$135.00

USD

Profit on Delivery

(Assumes \$.60/gal. margin and \$65.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.60	\$60.00	\$65.00	(\$5.00)
200	\$.60	\$120.00	\$65.00	\$55.00
300	\$.60	\$180.00	\$65.00	\$115.00
400	\$.60	\$240.00	\$65.00	\$175.00

USD

Profit on Delivery

(Assumes \$.65/gal. margin and \$65.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.65	\$65.00	\$65.00	\$0.00
200	\$.65	\$130.00	\$65.00	\$65.00
300	\$.65	\$195.00	\$65.00	\$130.00
400	\$.65	\$260.00	\$65.00	\$195.00

USD

Profit on Delivery

(Assumes \$.85/gal. margin and \$65.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.85	\$85.00	\$65.00	\$20.00
200	\$.85	\$170.00	\$65.00	\$105.00
300	\$.85	\$255.00	\$65.00	\$190.00
400	\$.85	\$340.00	\$65.00	\$275.00

USD

Profit on Delivery

(Assumes \$.95/gal. margin and \$65.00 cost of delivery)

Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.95	\$95.00	\$65.00	\$30.00
200	\$.95	\$190.00	\$65.00	\$125.00
300	\$.95	\$285.00	\$65.00	\$220.00
400	\$.95	\$380.00	\$65.00	\$315.00

USD

In short, we cannot afford to make small drops or wasted stops; particularly any delivery under 200 gallons. In fact, under any of these scenarios, 200 gallon deliveries are far from profitable.

So “STOP IT!”

(Raised Voice or Yelled out at the audience to drive the point home.)

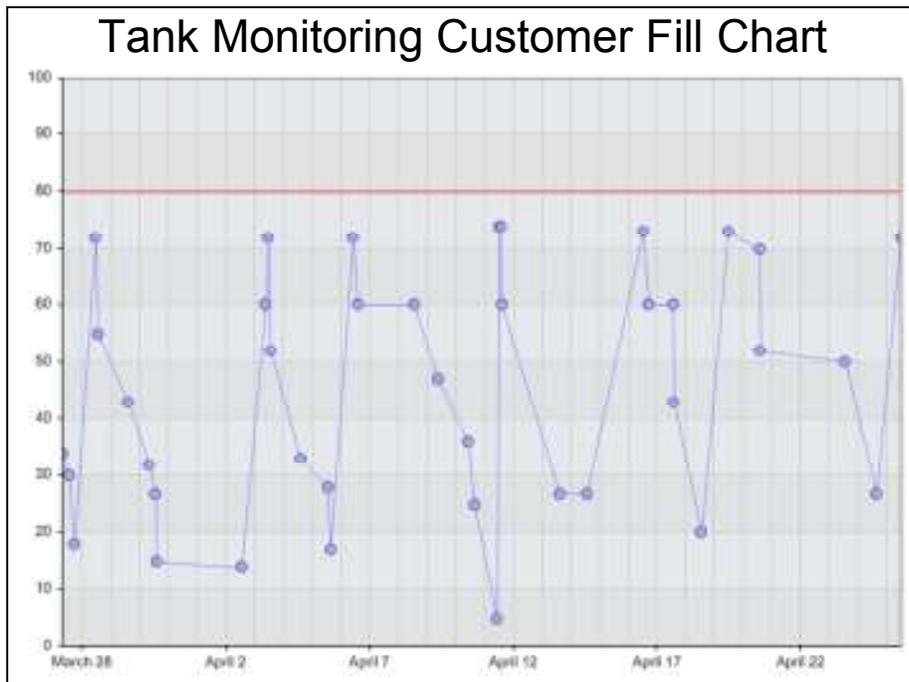
(Borrowed line from PGAC Award Dinner Keynote Presentation of Dawnie Heartwell, which included an excerpt from *The Bob Newhart Show* in his role as psychiatrist offering behavior change therapy to actor portraying a psychotic client.)

Therein rests the point of business operations today. You must find new ways to make less stops per customer while delivering more gallons.

One Retailer Wrote:

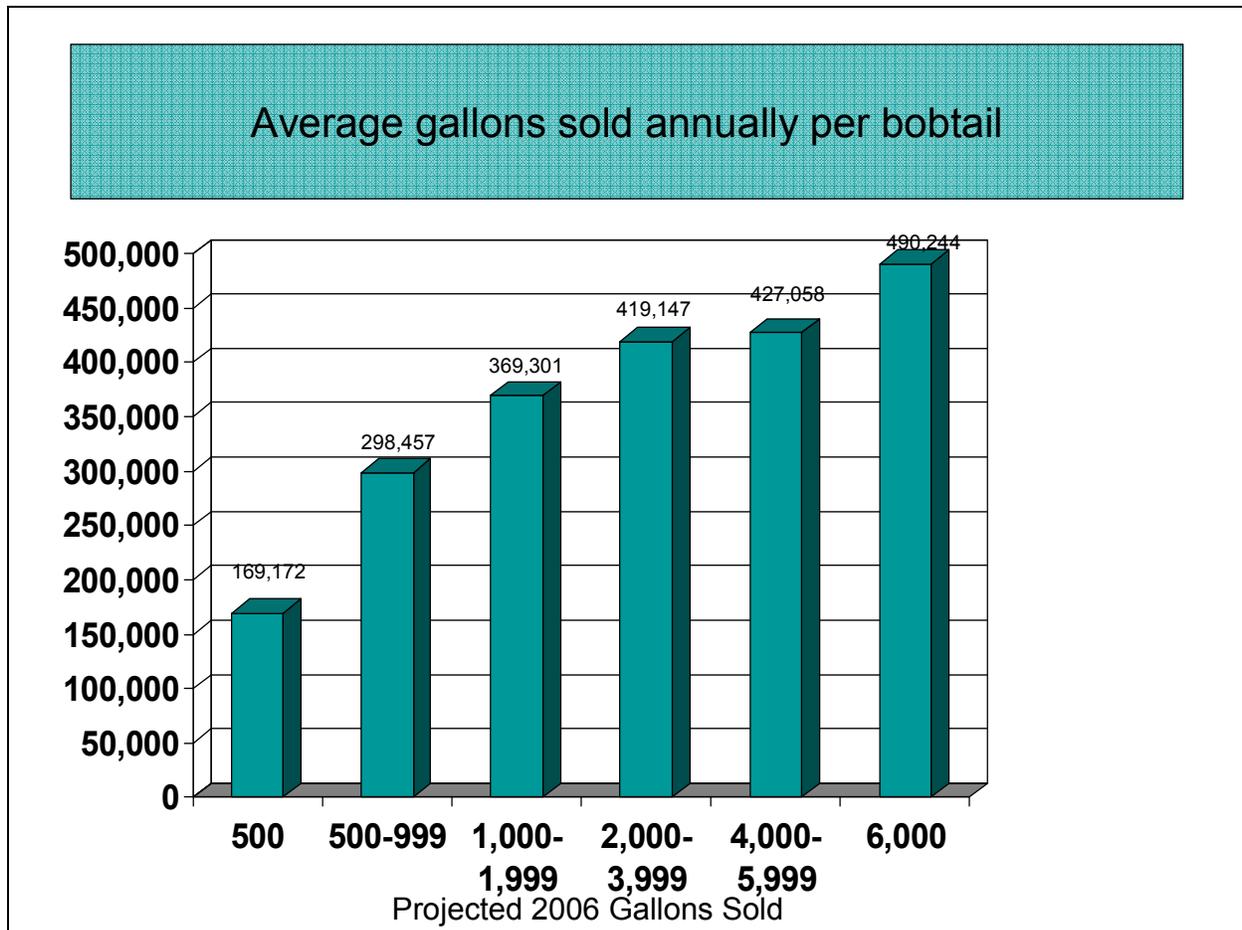
"If I can cut some miles off and deliver more gallons per stop, we would save 10-15% on vehicle costs."

Let's look at that statement a little closer. This is the history of one of our dealers whose tank we monitor for their end-user. I have this dealer's permission to use this data, so long as the customer or location is not revealed. So meet the fictitious Elmer Gantry of Clarksville, TN, a dubious character at best, but a good propane user nonetheless.



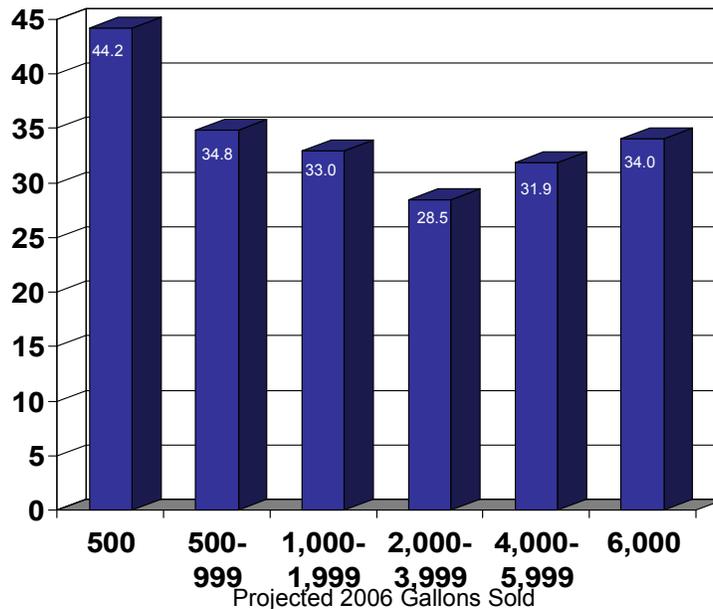
As you can see, **this customer is erratic**. This customer is a 24/7 end-user, but a number of factors dictate sporadic consumption. In the past, this dealer delivered to this account every three (3) days because there were enough instances during each month that the customer’s consumption required a delivery every third day. This was not consistent though. There were as many instances each and every month that consumption was a fourth, half or none of the norm, resulting in wasted trips and inefficient use of drivers, trucks and back-office personnel to process those extra short-gallon stops. **So, if you eliminate these types of stops, will you cut miles and deliver more gallons per stop? Of course. This is your goal today, by the way!**

For the bean counters - - - let’s dissect these per-stop costs. First, they seem to run higher, according to the “State of The Industry Survey”, for independents and majors than for mid-size or regional companies. To begin, let’s look at the average gallons the Survey reported were sold per bobtail that year. We will use an average 1,000MM to 1,999MM gallon per year/per distributor (plant/district) as shown below for all remaining calculations.



Average bobtail miles driven annually per customer

As we continue to compile our more exact operating costs, let's look at what the "State of The Industry Survey" revealed about the Average Bobtail Miles Driven Annually Per Customer:



As stated, we have assumed that you are an average size marketer (1 million to 2 million gallons per year). Your peers say that you average 33.0 miles driven per year, per customer. (Not per trip but over the course of the year to service a particular customer, including ancillary miles). This would be farther, I assume, for marketers here in Canada, **so** this would mean that if you use \$3.00 p/g fuel costs, that you get 4.5 mpg (allowing for product transfer or PTO time), that a bobtail costs you \$100,000.00 (with a \$10,000.00 salvage value) and insurance, maintenance, taxes and licensing over a five-year period can be purchased for \$5,000.00 annually, then your vehicle operating cost is \$33.50 USD per customer/per year. (By the way, the "State of The Industry Survey" says that you average 787 gallons per customer per year.)

Vehicle Costs

- 33 miles + 4.5 MPG = 7.33 gal x \$3.00 = \$22.00
- \$100,000. Vehicle cost - \$10,000. Salvage + \$90,000. ÷ 5 yr. = \$18,000. ÷ 2,000 customers =9.00
- Insurance (\$1,500.), Taxes & License (\$400.) Maintenance/Tires/Oil (\$3,100.00) + \$5,000. ÷ 2000 customers = 2.50

Average Annual Vehicle cost per customer..... \$33.50

Let's look at the benefits you pay; payroll taxes, workers' compensation and unemployment:

Average percent of retailers paying employee benefits

	2006	2005
Paid vacations	91.6%	88.7%
<i>Avg paid days: 13.4</i>		
Health insurance	85.5%	85.6%
<i>Company pays: 82.4%</i>		
Uniforms	74.8%	70.7%
Retirement	67.9%	61.7%
Life insurance	52.7%	57.1%

Overall benefits have gone down, but maybe it is because wages have gone up:

Avg percent increase in employee benefits costs

2003	22.0%
2004	18.3%
2005	13.3%
2006	9.9%

According to industry reports, the average pay for drivers is \$14.03 USD p/hr. Add to this payroll taxes and benefits, and the average driver is worth \$19.36 per hour to you, or \$40,260.35 USD per year. Divide that figure by the Average Customers Serviced per Service Vehicle, which according to the survey is 891, and your driver cost is \$45.19 USD per year per customer.

Cost of Drivers:

Wage \$14.03 p/hr. x 2,080 hrs =.....	\$ 29,182.40
FICA \$29.182 X 7.65% =.....	2,232.45
FUTA & State (\$11,000 X 4.5%) =.....	495.00
Workers Comp (\$8.00 p/c) =.....	2,378.00
Uniform Allowance =.....	400.00
Medical Insurance (Co Pay 82.4%) =.....	3,955.20
Periodic Training/Certification/DOT =.....	500.00
Retirement Comp 4% =.....	<u>1,167.30</u>
 Total Driver Cost =	 \$ 40,260.35
Customers	<u>÷ 891</u>
Total Driver Cost Per Customer	\$ 45.19
	USD

Of course, back-office support, your executive salary and a return-on-investment from your customer tank assets, bulk-plant and service vehicles must still be included.

A Customer Service Representative, at a rate of \$10.00 USD per hour, with taxes and some benefits will cost you \$25,847.20 USD per year, \$12.43 USD per hour. This is \$29.01 USD per year, per customer.

For yourself, you should add at least double your driver’s cost to your business, or \$90.38 USD per year, per customer.

Investment in a \$100,000 USD Bulk Plant, 891 customer storage tanks with blocks, regulators and pigtails (\$850.00 USD x 891 = \$757,350.00 USD) and inventory, A/R, tools, office furnishings (\$100,000.00 USD) and technology deployment of \$200,000.00 USD totals \$1,057,350.00 USD. ROI over a five-year term and for every 891 customers should be \$211,470.00 USD per year, or \$237.34 USD per customer.

This means that each customer costs you each year:

Annual Per Customer Cost:	
Vehicle Expense	\$ 33.50
Driver Cost	45.19
Back-Office Support	29.01
Executive Management	90.38
ROI on Customer Total Assets	\$ <u>237.34</u>
Total Cost Per Customer	\$435.42

No matter how you cut this figure, for a residential customer, your cost per stop is well over \$75.00. In fact, it is over \$100.00 per stop So, Lets look at our “PICTURES” of Profit on Delivery charts once again, only this time we will use a \$100.00 USD per stop cost of delivery with a higher than normal \$.85 per/Gal. average margin. This is:

Profit on Delivery (USD)				
(Assumes \$.85/gal. margin and \$100.00 cost of delivery)				
Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.85	\$85.00	\$100.00	\$15.00
200	\$.85	\$170.00	\$100.00	\$75.00
300	\$.85	\$255.00	\$100.00	\$155.00
400	\$.85	\$340.00	\$100.00	\$240.00

What about using a \$.65 USD per/Gal average margin?

Profit on Delivery (USD)				
<small>(Assumes \$.85/gal. margin and \$75.00 cost of delivery)</small>				
Gallons	Margin per Gal.	Margin	Cost of Delivery	Profit
100	\$.65	\$65.00	\$100.00	(\$35.00)
200	\$.65	\$130.00	\$100.00	\$30.00
300	\$.65	\$195.00	\$100.00	\$95.00
400	\$.65	\$260.00	\$100.00	\$160.00

The “PICTURE” changes once you include all of your real Operating Costs of doing business. Over 300 gallons per stop are required to clear a \$100.00 Gross Margin So, the task today is to reduce the number of stops per year. The question is how to accomplish that end:

- It means no more wasted stops.
- It means knowing what the propane level is in your customer’s tank before your truck leaves the plant yard,
- and it means changing the way you do business.

Bobtail efficiency challenges are pretty much the same. Your propane operation requires that a lot of data be managed with imperfect tools, seasonality of business, vastly different resources and that you assemble a motivated, focused and competent workforce. It also includes efficient deployment of all of these but, most important, leadership by you!

Industry Consultant, Randall Doyle, has defined efficient bobtail operations as:

“Safely delivering the maximum gallons, in the fewest stops, in the least time, in the fewest miles, at the lowest cost, while eliminating out-of-gas incidence.”

~Randall Doyle~

How is this done? Let's look at six relevant areas that must be done well.

These are:

1. Effective scheduling and routing
2. Performance Management System
3. Effective Customer Order Management System
4. Customer Relations & Proper Tank Sizing
5. Efficient Resource Deployment
6. Efficient Operating Models

Effective Scheduling and Routing requires reliable data each day to plan schedules to maximize gallons delivered in the fewest stops and with the fewest miles driven. Daily schedules use technology to prevent a bobtail from being driven to keep people busy, driven into the same area(s) repeatedly and returning to the plant with gas. Consumption billing is an option available to marketers in 26 states and provinces and can be used in conjunction with some remote tank monitors. Consumption billing offers the most economical delivery method and the most control over your delivery costs, so consider it if it is available for use by your state's or province's Division of Weights and Measures.

Performance Management includes employee incentives to promote bobtail efficiency and create a "business improvement" culture where your team is continually seeking ways to improve gallons per stop and reduce miles driven. Low performing employees are to be addressed.

Effective Customer Order Management uses a system that provides reliable customer use data. This should include remote tank gauge technology in any instance where a customer's use cannot be accurately predicted and where you are running the "milk-man" route in fear that the customer might run out. Set the customer's tank refill point as low as possible to maximize gallons per stop, but with each customer's demand managed to prevent out-of-gas calls. Again, consumption billing is a possibility in a lot of areas.

Customer Relations & Proper Tank Sizing is finding the right combination. Coupling the size of the tank with a customer to minimize the number of stops per year. It is called Customer Profitability Analysis. It also includes managing closely fall-fill top-off programs and will-call customers. In certain instances, tank monitoring fulfills these requirements.

Efficient Resource Deployment selects the most cost-effective vehicle combination; cab and chassis and barrel for the most efficient delivery of gas. Have no more trucks than necessary. Of course, this also includes monitoring customer tanks and using remote tank monitors to turn your customer storage into tertiary storage.

Efficient Operating Model – Keep boundaries between driver territories and branches sharp and clean.

Proven solutions that work are:

1. Effective Leadership
2. Use Information Technology
3. Increase gallons per Bobtail
4. Perfect the Prediction Demand System
5. Manage the Will Call Customer
6. Attract and Retain Quality Drivers
7. Effective Performance Pricing
8. Implement Performance Management
9. Choose Vendors that are Seamless
10. Train and Change

1) **Effective Leadership.** It starts with you! Create a “business improvement” culture. Allocate time, resources and attention to this detail. When deploying technology, do so as a positive. Point out the benefits to the customers, additional revenues for the company and the assistance that technology will be for your employees.

2) **Use Information Technology.** IT use is increasing. Over one-half of all marketers today use on-board computing. *LP-Gas Magazine* reported that 17.0% of marketers used remote-tank gauge monitors. This year they report that 26.0% more dealers are incorporating this type of technology into their businesses.

3) **Increase Gallons per Bobtail.** A significant savings in the cost-per-gallon delivered can be realized by either increasing gallons per bobtail or reducing fleet size. Ditto with personnel. Drivers need to rifle in on profitable stops. **This means knowing what is in the customer’s tank and not just “driving by” to see what is in the customer’s tanks.** Therefore, focus on maximizing the throughput of your infrastructure.

- 4) **Perfect the Predictive Demand System.** Reliable customer use data is the key. Diligent marketers understand that each incremental gallon delivered per stop is one gallon sold at zero operating cost. Try this exercise. Compute the gallons delivered as a percent of the customer's tank capacity from your driver's reports. Include zero gallon stops. Use your driver's memory if you have to. When you do, you will probably find that your performance was worse than you thought.

- 5) **Manage the Will-Call Customer.** **First**, for a will-call customer to be profitable, you will need to calculate your incremental costs, like we did earlier. **Second**, manage the will-call customer. The will-call customer should never dictate how you run your business, but the will-call can add bonus profits if managed correctly. Tank monitoring is one way to do this and it can convert the will-call into a constant customer contract, which adds both profits today and resale value to your business tomorrow because you have him under contract. Offer tank monitoring as a convenience to them, but get a contract.

- 6) **Attract and Retain Quality Drivers.** You have to have a nose for talent, but once you do, create a culture based on both individual and team performance and a desire to do one's best. The improved productivity offsets the higher costs.

- 7) **Effective Product Pricing.** Know your costs before you set your price and fees. Include the cost of technology.

- 8) **Implement Performance Management.** Your P&L should tell an interesting story about your operations, your use of technology and your control of your business. Use it to set **benchmarks**, then, **inspect what you expect.**

- 9) **Choose Vendors That Are Seamless** and that work well with other vendors i.e.; through Application Programming Interfaces (API), routing software, etc. that compliment your current vendor(s).

- 10) **Train and Change;** the number one failure in deployment of new technology is to buy it but to not change the way you perform tasks. In short, you cannot expect to keep doing the same things the same way and get different results.

In Summary



Remote tank monitors will increase efficiency, goodwill and profits by eliminating runouts, wasted trips and short fills forever with less investment in tanks, trucks and labor.

So

What is the most cost-effective method for monitoring your propane inventory levels?



The windshield method –
cost is about \$4.00
per mile!

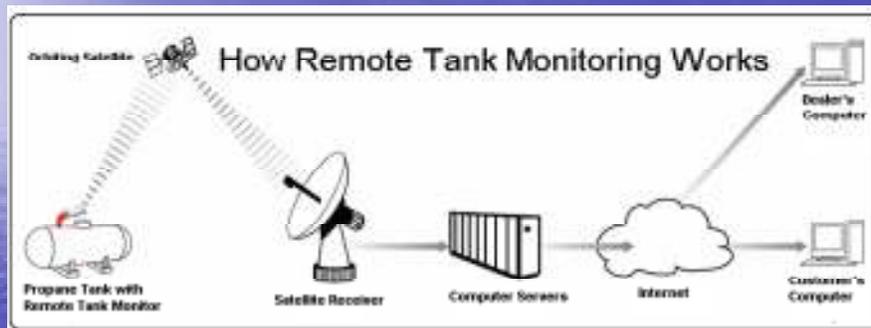
VS



The crystal ball method –
not very reliable but at
least its free.

VS

Remote tank monitoring. It's
reliable and cost-effective.



A technology base today positions you to take on additional benefits tomorrow. It eases the “shock” process for your employees, your customers, and on your P&L and Balance Sheet. It also adds to more than your bottom-line through market advantage, image, and customer and employee perception, so **consider the soft-benefits (the intangibles), which are just as real as the tangible elements.**

Last, the costs of lost opportunities to not make a decision are simply too high. To wait for the cost to come down will mean that you will pay the same as if you had the technology (through inefficient operations) and still not have the technology. Costs will not come down enough to offset the current value of operating savings that you can realize today.

Well, this is the Question/Answer time. So I will start. I have a question. Do you have the answer?

Thank you for this opportunity to be here today. It has been both a pleasure and a joy.



**“Economics of Technology:
Remote
Tank Monitoring”**

Dealer Forum Presentation
By: R. L. Humphrey
Friday, June 5, 2009

**Propane Gas Association of Canada
2009 Annual National Convention**

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R. L. Humphrey is an active member in National and State Associations, Past Director and Officer of State Associations and initial promoter and author of the Propane Education and Research Council (PERC) legislation and first Council Chairman of the first PERC (MO-PERC).

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SOURCES: *LP-Gas Magazine-State of the Industry Survey; 2006*
Randall Doyle-Consulting-Bobtail Efficiency; and Industry Snap-shot
Ron Bechler-retired North American Satellite Corporation-Account Executive-Central States