



Toyota

TMMK ENERGY NEWS SOURCE

APRIL 30, 2008

The Toyota Greenland Stakes; And the winner is.....

The shop representative horses have crossed the finish line and the winner for the FY '08 Toyota Greenland Stakes was Paint #2. The recognition ceremony was held Tuesday, April 8th with the top three shops being recognized by our president Steve St. Angelo.

Steve thanked everyone for their hard work, but also challenged everyone to reduce even more energy usage in FY '09.

This activity resulted in over \$126,000 dollars in savings with a reduction of 1,032,117 KWH's and

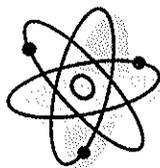
2177 metric tons of Co2 emissions. Congratulations to Paint #2 on their win and thanks to each of the shops for your efforts during FY '08. Details will be forthcoming on new energy reduction programs for FY '09.



The top three shops and their energy reduction over FY'07 baselines were as follows (l to r): WIN - Paint #2 (10.38 % reduction); PLACE - Stamping (9.62% reduction); SHOW - Assembly #1 (8.52% reduction).

Energy Costs at TMMK

Why is energy reduction so important to TMMK? The cost of energy and water required to build cars and engines are direct overhead cost to the company. This may be surprising, but here are the actual **monthly average** costs for TMMK utilities during FY08:



<u>ELECTRIC</u> <u>BILL</u>	<u>NATURAL</u> <u>GAS BILL</u>	<u>WATER</u> <u>BILL</u>
\$1,960,053	\$1,235,630	\$68,016

As you can see, it is very important for us to reduce energy and water usage to the lowest possible levels. If we only use the actual utilities required for production, we will reduce company cost and help the environment by reducing total carbon emissions.

Roger L. Wallin (A/M Utilities Eng. / Energy Mgt)

Energy Star Award for Sustained Excellence



TEMA and TMMK were presented the Energy Star Award for Sustained Excellence in an awards ceremony located in Washington D.C. on Tuesday April 1, 2008. This was our second straight year to win this award. The Energy Star is a distinguishing mark of energy efficiency for auto assembly plants in the United States and identifies this plant's status among the most energy efficient based on our performance in EPA's National Energy Performance Rating System.

Representatives attending the presentation ceremony from TMMK included Steve St. Angelo, David Absher, and Roger Wallin. We were honored to receive this national recognition and challenge everyone to be a "three-peat" winner for 2008. Congratulations to everyone for your hard work and commitment!

ENERGY SHOP CAPTAINS

Shop Captains are Team Member's assigned to lead the energy management program in each shop. Each member of the TMMK Energy Management Organization, (EMO), is available to help you with any energy related project or problems you may be facing. Please contact your Shop Captain or one of the Facilities Control Support Specialists for assistance.

SHOP	CAPTAIN	EXT.	FC SUPPORT	EXT.
Stamping	William Martin, Ryan Neward	2720, 6550	Bethany Giordano	4135
Bodyweld	Dennis Clark	4129	Bethany Giordano	4135
Plastics	Gary Van Gorp	2914	Bethany Giordano	4135
Paint 1	John Hommrich	4035	Ron Jones	2502
Paint 2	John Hommrich	4035	Ron Jones	2502
Assembly 1	Jeanica Matlock	3071	Bethany Giordano	4135
Assembly 2	Jeanica Matlock	3071	Bethany Giordano	4135
Powertrain	Terry Thomas	4802	Ron Jones	2502
Quality Control	Eddie Inman	4668	Ron Jones	2502
Die Manufacturing	Jeff Lackey	2166	Bethany Giordano	4135

2007 December Shutdown Energy Reduction Challenge Winner

During the "ENERGY REDUCTION CHALLENGE" between the shops for the December 2007 Shutdown, Powertrain had the highest energy reduction level of 50.63% from their Fiscal Year '07 non-production usage. This was the third time for this competition which assists TMMK in reaching its non-production energy usage reduction goals.

Assembly 2 was the winner of the award for the first two competitions, but the third time was a charm for Powertrain. To accomplish this special recognition, they focused on reducing compressed air and electricity usage. TMMK's Senior VP, **Koichi Sugihara**, presented the "Shutdown Award of Excellence" plaque and banner to Powertrain for their excellent strides in non-production energy reduction.



Pictured include, l to r: Mark Klee, Terry Thomas, Koichi Sugihara, Dave Cox & Roger Wallin.

Kaizen of the Quarter & Year

Energy Kaizen activity is a very important part of the TMMK energy reduction effort. We will continue to recognize those Kaizens that show great creativity and energy consciousness through the Kaizen of the Quarter Award. Previous quarterly winners are also eligible for the Kaizen of the Year Award.

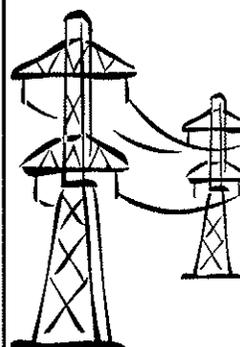
Quarterly winners will receive their choice between a TMMK long sleeve energy team t-shirt or a compact fluorescent bulb.

The Kaizen of the Year winners will receive a TMMK Energy Team jacket at an awards luncheon held in the suggestion submitter's honor.

WINNER OF THE QUARTER: Theme #: 9009277; Turntable Off (J. Wolfe, T. Lesak, R. Faulkner, S. Glass & B. Bruner)

WINNER OF THE YEAR: Theme #: 8610419; Oven Off (Thomas Reid & Sammy Savyers)

Current Energy Costs



UTILITY	COST
Natural Gas	8.99 / mcf
Steam	9.97 / klb
Compressed Air	0.15 / kcf
Electricity	0.049 / kwh
Water	2.05 / kgal
Water (DI)	2.56 / kgal
Waste Water	6.50 / kgal
Chilled Water	\$34 / kton



TMMK ENERGY TEAM

The Toyota Greenland Stakes Racing to Our Energy Reduction Goals

Welcome to the latest edition of the TMMK Energy News Source. I want to thank everyone for the positive feedback we received on the previous edition. We also had great participation on the energy crossword puzzle and the non-production energy slogan contest.

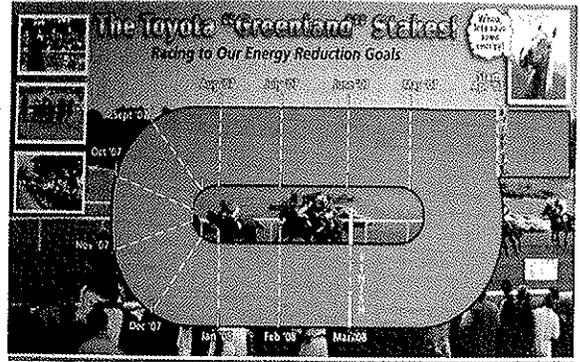
In each edition I will be sharing specific energy reduction activities and programs to keep you informed and also ask for your help in reaching our company energy goals.

Our newest energy reduction program is **The Toyota Greenland Stakes: Racing to Our Energy Reduction Goals**. Kentucky is the horse capital of the world so what better way to visually communicate, track, and reward each shop's energy reduction efforts than a horse race.

The focus of the contest is weekend non-production energy usage. Each main production shop, eight total, is represented as a horse running in the race. The monthly target is a 15%

reduction from last fiscal year's weekend non-production actual usage.

- Each month the shop representative horse will be moved / positioned on the track using their weekend non-production actual usage results versus the 15% reduction target.
- The contest board will be located in the 8:40 a.m. meeting area in Assembly #1.
- Contest results will be shared monthly during the 8:40 a.m. meeting.
- Shop leaders will be recognized at that time.
- At the end of FY08 the shop with the best overall reduction to the target will get the WIN.
- A Governors Trophy will be presented to the shop with the



largest % of overall reduction and a grand prize to be determined.

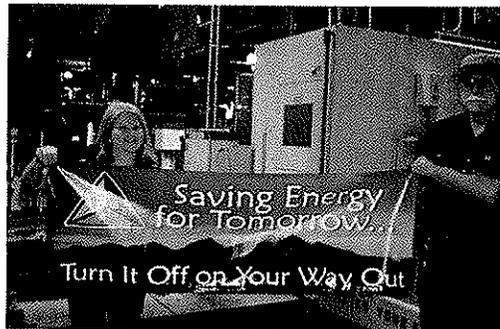
- **PLACE** and **SHOW** will also be recognized if they are below the 15% target.

I am asking that each of you support your respective shops in this reduction challenge. Please contact your shop energy captain for ideas and support in your energy reduction kaizen efforts. Good luck to each shop and **"Let the Race Begin"**.

Roger L. Wallin

A/M Utilities Engineering/ Energy Management

Non-Production Energy Slogan



Saving Energy for Tomorrow... Turn It Off on Your Way Out

Congratulations to Sara Staple (K4320) in Powertrain, for winning the energy slogan contest. Sara is pictured at far left with her Group Leader Scott Shewmaker. Her slogan was selected by the TMMK Energy Team out of 27 entries. The new slogan will be used in various energy newsletters / communications and a plant banner for a visual reminder to everyone to conserve energy.

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Energy Tips for the Summer

- Shelter sun exposed windows with awnings & shrubbery
- Keep your blinds & draperies closed on hot sunny days
- Use a clothesline to save \$
- Longer days, shorter nights. Adjust your outdoor light timers to save \$ and extend bulb life

TOYOTA

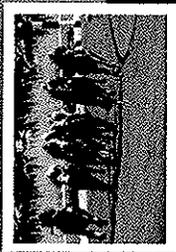
TMMK ENERGY NEWS SOURCE

The Toyota "Greenland" Stakes!

Racing to Our Energy Reduction Goals



Whoa, let's save some energy!



Start Apr '07

May '07

June '07

July '07

Aug '07

Sept '07

Oct '07

Nov '07

Dec '07

Jan '08

Feb '08

Mar '08

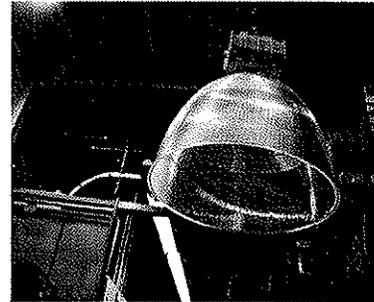
TRACK 10.5" WIDE

TRACK size 76" x 30"

F N S H

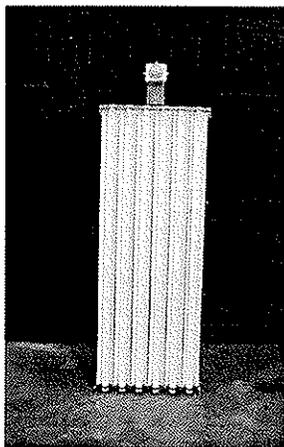
Facilities Control DICEM group has many different responsibilities. One of these responsibilities is energy reduction activity for the entire plant. This activity includes investigating new technology and finding ways to implement them here at TMMK. The DICEM Group is also a liaison for other NAMC plants energy reduction and Yokoten activities. Two of the team members involved in this activity are Herman Hall and Lance Hamilton.

TMMK's original plant lighting had been in place for fifteen years due to minimal advancement in lighting technologies. With the advent of Pulstart Metal Halide Lighting Fixtures, Facilities Control began plant wide installation of these energy efficient fixtures in 2002. This project reduced energy usage by 40 - 60%.



(Original Light Fixtures)

The DICEM group recently completed a three year lighting project installing new high intensity fluorescent lighting fixtures. Trials were conducted with different fluorescent light manufacturers until the best solution was obtained for maximum lighting and energy efficiency. In addition, they installed motion sensors on the majority of the overhead plant lighting fixtures. Upon completion, the lighting project reduced energy usage by approximately 50% and increased light level by 20%. Total cost savings are in excess of \$500,000 per year with a 10,242 metric ton reduction of CO2 emissions.



(New Light Fixtures)

IDEAS OR QUESTIONS ON ENERGY REDUCTION?

Please contact the DICEM group members below.

Jeremy Due, Skilled Group Leader x2838

Herman Hall, Skilled Team Leader x2588

Lance Hamilton, Skilled Team Member x3287

Below are other energy reduction activities that have been implemented or are occurring around the plant.

- **Paint 1.** As a result of Paint 1 reducing Conditioned Air Flow to the Primer Booth, a large portion of the booth is no longer used. This will result in an energy savings of over \$ 257,000 per year.
- **Paint 1, 2.** A new activity led by TEMA named TWM, Total Water Management, was conducting in both Paint shops on March 19-20. TWM is a blitz activity to identify water reduction and cost saving opportunities. This focused blitz event identified a potential water reduction of 180 gal/veh and cost savings if implemented of over \$253,800 per year.
- **Powertrain.** Continues to conduct Green Weekends. The last four events have resulted in energy savings of \$11,166.

“Whoda Think It “

Ceiling fan/light combination units that have earned the ENERGY STAR rating are about 50% more efficient than conventional fan/light units. This can save you \$10 per year on home utility bills, plus any additional air conditioning or heating savings you may gain when your fan is operated properly.

“Whoda Think It”

Did you know that the average home owner spends about \$1,900 on energy costs every year? Change to appliances that have earned the ENERGY STAR rating, and you can save \$80 a year in energy costs, while saving the environment.

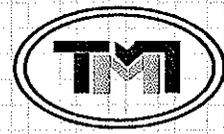
ENERGY WORD JUMBLE

1 Z E I A K N C I T V I Y A T
 2 I T H I L N G G
 3 L A U T R N A S G A
 4 N R T U T I F O F
 5 M S E A T Y P U P S L
 6 I Y C I T R L E E C T
 7 G I E I A N H E D E R E G S D Y A
 8 L D L I C E H R W T A E
 9 D O M C E R E S S P R A I
 10 G Y E E N R V S I A N G S
 11 G H H I I C O S
 12 V S E C R O E N
 13 V E A S Y O E M N
 14 K H I N T N G E E R
 15 N R E O I C U D T

Return completed puzzles to
 Bethany Giordano at MFGS/FC-K
 by **May 16th**. All entries will be
 placed into a prize drawing.
 Winners will be notified.

Name: _____
 Ext: _____
 Cost Ctr: _____
 Shift : _____
 Group Leader : _____

1
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 10
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 15



TOYOTA IS PROUD TO BE:

"Whoda Think It"

The energy used in the average home can be responsible for more than twice the greenhouse gas emissions of the average car. When you use less energy at home, you reduce greenhouse gas emissions from power plants and help protect our environment from the risks of global climate change.