

Meeting Location Information on Page 3

Section Web Site: www.saearizona.org - Sign up for your newsletter on our website.

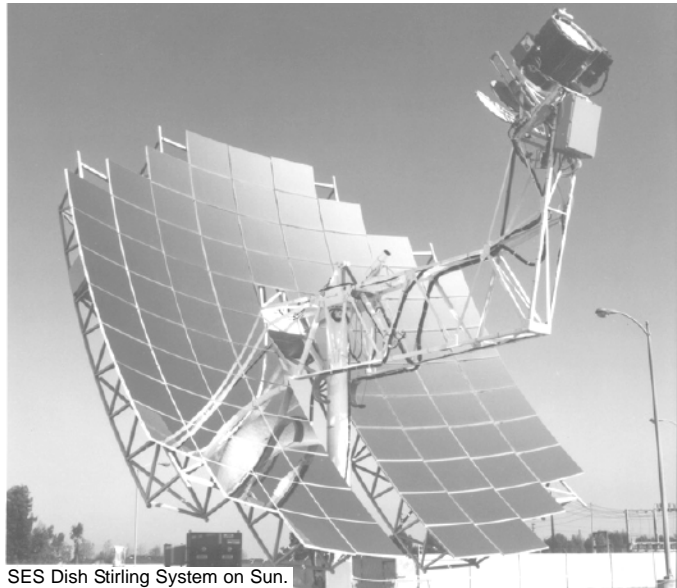
HIGHLIGHTS...

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|----------------------------|-------------------------|-----------------------------|
| - Stirling Energy Systems | - SES cont. on Page 3 | - Presentation Champion |
| - Message from the Chair | - Bob Liden's Biography | - A World In Motion |
| - Recap of January Meeting | | - Maps for Meeting Location |

Dinner Presentation...

Stirling Energy Systems (SES) by Bob Liden

Since the US imports over 65% of our oil from outside the US, and even natural gas is now imported, it is critical that we find alternative means of generating electricity using renewable sources. Solar energy is an alternative. However, the traditional approach has been to use silicon photovoltaic cells that remain very costly and requires significant resources to make.

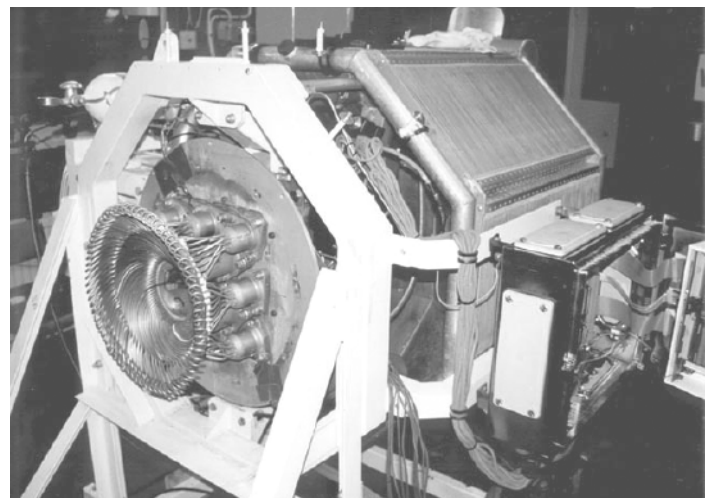


SES Dish Stirling System on Sun.

Stirling Energy Systems (SES) has combined the concentration of solar energy using mirrors with conversion of this energy (heat flux) into electrical power through use of the external heat engine (Stirling). The Stirling engine predates the internal combustion engines. Stirling engines work on the principle of expansion and contraction of a working fluid as

a result of using an external heat source to heat the fluid. The cold side of the engine is similar to an IC engine.

Stirling Energy Systems (SES) is a systems integration and project management company that is developing equipment for utility-scale renewable energy power plants and distributed electric generating systems ("gensets"). SES is teamed with Kockums Submarine Systems, NASA-Glenn Laboratories, the U.S. Department of Energy (DOE), and The Boeing Company for solar power plants. SES is positioned to become a premier worldwide renewable energy technology company to meet the global demand for renewable electric generating technologies through the commercialization of its own Stirling cycle engine technology for solar



SES Dish Stirling System Power Conversion Unit (PCU) on maintenance stand with heater head removed.

Sterling Energy Systems article continued on page 3

DATE	TIME	LOCATION	COST With Dinner	Presentation Only
Feb. 15	Social	- 6:00 pm	Members - \$22	\$10
	Dinner	- 6:30 pm	Guests - \$27	\$10
	Presentation	- 7:30 pm	Students - \$10	no charge
RSVP by 10:00am Tuesday February 12.			Call Donna Miranda: 602.364.7456	

Message from the Chair

Are you in the market for a new sports sedan? If so, I hope you'll give the new 2007 Infiniti G35 a look! Steve Neese from the Nissan Proving Grounds stopped by last month to give us terrific presentation on the updated vehicle.

I was impressed with Steve, not only from his great speaking ability, but for staying around after the presentation ended to answer questions. He was at the hotel talking to the students and guests for more than an hour and half after the meeting ended! In particular, the students enjoyed a first-hand opportunity to talk to an engineer, working for a automobile manufacturer, to gain a better insight into his working life. I heard questions like What does it mean to be a vehicle test engineer? How much of your schooling do you use? What do you do on an average day?

I enjoyed being able to sit in the new G35, look around, play with the navigation and interface and compare the changes from the previous model. Thankfully we had two cars on display for people to sit in and use, which made the lines shorter. Thanks for Derek Logan and Steve Neese for helping participate in another excellent program from the SAE AZ-NV section. We hope Steve will return in the future with another vehicle!

I'd like to take a moment to thank Cathleen Gary for her help this month. We had a bit of a mix up with the hotel and Cathleen spotted the error and worked hard to correct the issue. As a member who attends the meetings, you might not see all the preparation that goes into coordinating the event, but Cathleen is one of those individuals who works in the background making sure things run smoothly. Thanks Cathleen!

I'd also like to take a moment to congratulate Kevin Willson and Max Rumbaugh, Jr. for receiving awards this month. You may remember a few months ago, the section nominated them for the Distinguished Younger Member and Distinguished Section Member awards. I was happy to see an email from Brian Taylor, manager of the SAE sections, congratulating Kevin and Max. To quote Brian's email "This is SAE's highest Section involvement honor, recognizing your dedication and contributions to SAE and your local Section." Next months program looks very interesting and informative, not to mention very relevant - I hope to see you there!

Dave Vasquez
Section Chair



Dave Vasquez, Section Chair

Recap of January Meeting

by Derek Logan

January's presentation began with an open display of two 2007 Infiniti G35s in front of the hotel. Steve Neese, our presenter from Nissan Technical Center N.A., was on hand to answer any questions. Attendees got to see (and



Steve Neese (left) and Derek Logan (right).

hear) first-hand all of the new technologies being used on this first redesign of Infiniti's very successful sales leader.

After dinner, Steve began with a description of Nissan's proving ground here in Arizona and then went on to discuss the development of the new G35. He has been with the program from early on and described how his group was involved with the top-level vehicle evaluation and development. From target setting and benchmarking to vehicle evaluation and testing, he provided lots of detail of his experiences. He also provided interesting insight into the decision-making process for balancing ride and handling.

The new G35 is a truly global vehicle and will be launched first in the U.S. followed by Japan. It will be later introduced in Korea, Russia, China and Europe. Steve was fortunate enough to test the vehicle across the U.S. plus Japan and Germany. He loved driving it on the Autobahn where he could get a good feeling for the car's ability to slice through the wind with low drag (0.29 Cd) and practically zero lift.

He informed us that the engine is the 4th-generation VQ35HR, a 13-time Ward's "10 Best Engines", and now has 306hp. Power is transferred to the wheels through either a 6MT or 5-spd Auto. The AT has Downshift Rev Matching and Automatic Shift Control with a lateral G-force sensor, so it can hold a gear during a turn. Just a few other chassis/drivetrain highlights include 40% stiffer platform, increased tire and brake rotor sizes, and front active steering (with optional rear active steering).

Some other new features include standard 7" color monitor display, intelligent cruise control with preview braking, optional touch-screen navigation, 9.5 gigabyte Music Hard Drive, Bluetooth Hands-free Phone System, magnesium paddle shifters (for AT), and the industry's first 3-way front door speaker array with 10" woofers.

Steve finished the presentation with a little teaser of some of the new and exciting cars coming soon including Infiniti's new G35 Coupe, a new Infiniti crossover vehicle, and Nissan's new GT-R!

We thank Steve for coming out and giving us such a wonderful presentation, and for sticking around to answer the many questions that continued well after the meeting was concluded.

Stirling Energy Systems cont.

and genset applications. SES is headquartered in Phoenix, Arizona, with an initial pilot operation at Sandia labs in New Mexico.

Stirling Energy Systems holds two key patents on the solar concentrator system that were initially filed by McDonnell Douglas (by virtue of a merger, now The Boeing Company) to manufacture this solar concentrator system, as well as six of the original solar concentrator systems that were fabricated in the 1980s. SES also acquired all of the intellectual properties, including significant trade secrets regarding technical and manufacturing aspects of the solar concentrator system. SES was granted a licensing agreement with Kockums, a major Swedish defense company, to manufacture, market, and sell the Kockums 4-95 Stirling engines.

The Mission of SES is to deploy clean and sustainable energy technologies to assist in the abatement of global warming and in directing the market away from old paradigm polluting sources of electrical power generation. With its strategic partners SES is positioned to build and operate renewable energy power plants. This world-class team will evaluate and integrate the finest technologies to fulfill domestic and international market demand.

SES is looking to remain at the forefront of the next-generation renewable energy technology development.

The presentation will discuss this exciting new technology and also show how several advanced engineering design and analysis software tools have been combined to validate the design prior to build.

Please join us as Mr. Bob Liden, Executive Vice President, General Manager for Stirling Energy Systems SES will be here to discuss this new alternative energy technology and how it will effect our future.



BOB LIDEN

Bob Liden, Executive Vice President, General Manager, and Member of the Board of Directors of Stirling Energy Systems, Inc. Over 35 years of experience in finance, strategic planning, and engineering. In addition to SES, he has worked for Ford Motor Company, Ramada Inc., Trans Energy Company, and General Acceptance Capital Corporation. He

is also a member of the Governor's Solar Advisory Council. Mr. Liden graduated with a B.S. and an M.B.A. from UC Berkeley.

Presentation Champion

by Derek Logan

Have you been thinking of joining the Board, but don't want to commit an entire year? Or maybe you'd like to help out, but only for one presentation?!

Well, we have just the ticket for you! We are introducing a new position of "Presentation Champion". For just one meeting you will help out by introducing the speaker and providing a brief article about the presentation afterward.

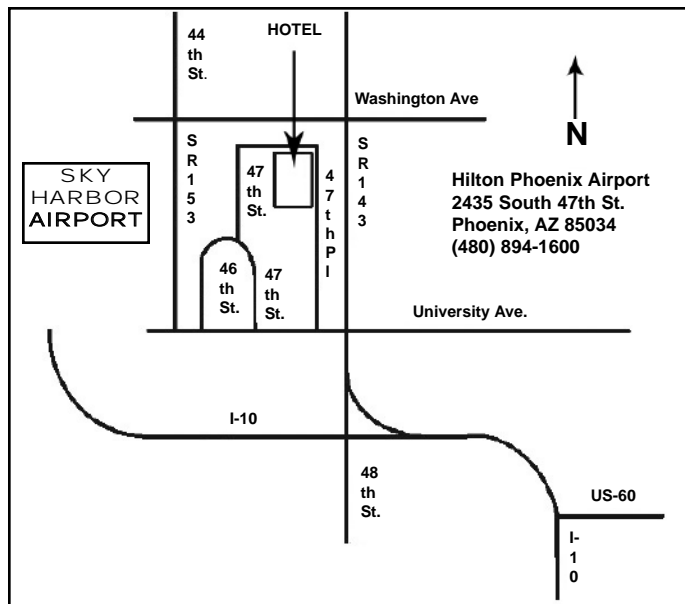
This is a great way to get involved without a long-term commitment. It is also a great opportunity to get to meet one of our highly-knowledgeable presenters.

You can do it as often as you like; just sign up for whichever presentation is still available.

Note: This opportunity is open to all SAE members including Student members.

Call 602-616-8180 or send an email to info@saearizona.org to sign up.

*** Meeting Location ***



A World In Motion

A World in Motion has been set up to enlighten youngsters about careers in science and engineering. Demand has been high--engineers are needed to go to local schools for a one-hour presentation. Please contact Joshua Rudin at 602.369.6487 for more information.



ESG Engineering has Industrial Design, CAD Design and Engineering Analysis capabilities including Stress, Dynamics, Fluids and Thermal. We also sell Z Corp rapid prototype printers, scanners and SensAble software. We are located in Tempe. www.esgeng.com How can we help you? Contact Bill Gest at 602-618-1304 for information.

THE UNIVERSITY OF ARIZONA ANNOUNCES:

THE 33rd ANNUAL RELIABILITY TESTING INSTITUTE
May 7-10, 2007

The 44th Annual Applied Reliability Engineering and Management Institute provides all engineers, and particularly Reliability Managers and Engineers, and Product Assurance Managers and Engineers in government and Industry a working knowledge of Reliability Engineering Theory and Practice; Mechanical Reliability Prediction; Reliability Testing and Demonstration; Accelerated Testing; Failure Analysis Techniques; Complete Industry Product Assurance Techniques; Maintainability; Customer Satisfaction, Strategies to provide the tools required to design, test and manufacture products which are highly reliable with minimum if any product recalls, easy to maintain, safe and less costly to operate, and sold at globally competitive prices, plus many more! Numerous practical applications of these methodologies are presented. This Institute will also prepare and help participants pass their ASQ Certified Reliability Engineer (CRE) Examination.

Clarion Hotel, Tucson Airport
6801 S. Tucson Blvd.
Tucson, Arizona 85706
520-746-3932 or 800-526-0550

Registration Fee: \$1500 Proceedings Cost: \$50

For Details and Technical Information, please write to:
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Or Email: dimitri@u.arizona.edu
Please peruse his website at: <http://www.arizona.edu/~dimitri>

The 33rd Annual Applied Reliability Testing Institute provides coverage of how to implement and manage the Design-for-Reliability process through testing; to implement an integrated Reliability & Maintainability Engineering management strategy; a practical approach to attain the high Reliability goals demanded nowadays; to improve our world-wide competitive posture by creating more Reliable products through testing; solder joint durability and their useful life estimation; the determination of the time-to-failure distributions, failure rates, mean lives, reliabilities, and their confidence limits at desired high confidence levels; small-sample-size, high reliability, short-duration, efficient tests; non-parametric testing; test duration, sample size, and number of failures determination; HALT and HAST; burn-in testing, Qualification and Reliability Demonstration Testing; failure analysis technologies; product assurance techniques for becoming more competitive in today's markets; development cycle time reduction; productivity improvement techniques to achieve U. S. leadership in world markets; all types of goodness-of-fit test; determination of the confidence limits of the actual Reliability, Mean life and Failure Rate of all types of components, products and systems at high confidence levels; solutions to participants' problems; plus much more.

ARIZONA-NEVADA SECTION: Meeting Schedule

February 15 - Stirling Energy
March 15 - Sky Harbor AP

THE 44th ANNUAL APPLIED RELIABILITY ENGINEERING
AND MANAGEMENT INSTITUTE
November 13-16, 2007

Dave Vasquez Chair 602-616-8180	Bill Gest Vice Chair bgest@esgng.com	Josh Rudin Secretary 602-369-6487	John Lester Treasurer 480-733-6532	Robert Riley Newsletter Editor 623-872-8010
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