2011 POWER GENERATION
Market Pulse Report
The 2011 Power Generation Market Pulse Report

The Market Trends Committee

Chaired by Brian Berg of Belgari Solutions, the Market Trends Committee provides EGSA with a forum in which market trends and other market data closely related to the power generation industry may be discussed in a way that benefits the Association and its members. The bi-annual “Market Pulse Survey” subcommittee is chaired by John Hoeft, Marketing & Technology Insights.

Beyond discussion, the Committee has the responsibility and ability to develop and make recommendations to the Board of Directors regarding programs and methods for the compilation of statistical information. The Committee focuses on complete power generation packages as well as component level trends to enhance the Association’s market knowledge of trade, product sales, growth rate, emerging technologies, economic trends, market forecasts and other statistical data in an effort to assist Association members in accomplishing their objectives.

The Committee recently offered all EGSA Members an opportunity to participate in the 2011 Power Generation Market Survey to gauge members’ impressions concerning current business conditions relating to the genset industry (Note: survey participation was not limited to suppliers or Distributor/Dealers). As a courtesy to our members, EGSA has produced this summary of the survey results. For more information about the survey or the Market Trends Committee, contact Brian Berg at brian.berg@bergari.com.

Report Objective

The EGSA Market Trends Committee bi-annually surveys the EGSA membership on how their business is performing and their power generation market opinions.

The survey data is self-reported, not validated and submitted without any supporting documentation. Nonetheless, individual company information remains confidential. Survey results are neither designed nor intended to include or provide price sensitive or competitive data. Instead, survey results are intended to provide member companies with a “pulse” or sense of the on-site power industry at large and an opportunity to compare their impressions with other EGSA Member companies.

Survey Methodology

The internet-based survey hosted online using Survey Monkey, a leading internet survey provider web site. An email invitation to participate was sent to over 1250 primary and secondary contacts at EGSA member companies for whom email addresses are on file. As an incentive to participate, EGSA offered those who completed the survey a chance to win a $200 gift card. EGSA members completed the survey by February 21, 2011.

Survey Results and Conclusions

A copy of each question along with a chart or graph illustrating the distribution of responses may be found in the pages following. Pertinent comments and Committee observations concerning each question’s results also are included.

• The respondents represented a wide cross section of the EGSA membership. Survey responses displayed a good distribution of the data.

• The Committee drew a number of obvious conclusions from the survey, including:

  - EGSA Members expect the 2011 power generation market to be better than in 2010; over 86% of respondents believe 2011 sales will be greater than last year.
  - Forty-one (41) respondents reported employee increases in the past six months. Thirty-two of those companies plan on yet additional employees. Twenty-three (23) other companies plan on adding employees after being relatively flat or needing to reduce the labor force in the past six month.
  - Seventy-seven percent (77%) of the respondents believe Tier IV Interim will have either “some effect” or a “significant effect” on their business.
  - Please see the result in question 9 for respondent’s explanations.

This survey was not created, conducted or tabulated using established industry practices for generating statistical data. EGSA did not create and utilize a random sample for the purposes of increasing statistical accuracy nor did EGSA require any respondent to provide proof of income, sales volume or company size via supporting data or third party verification.

Therefore, EGSA makes no claims regarding the statistical accuracy of the survey’s results as they relate to current or future real-world economic conditions. EGSA makes no claims or recommendations concerning the use of this survey’s results for marketing or sales projections. As designed and conducted, this survey is strictly intended to gauge impressions concerning company performance as well as current and short-term future market conditions across the entire range of EGSA membership.
**Question 1**
Which of the following best describes your company type?

1. Consultant / Engineer
2. Distributor / Dealer
3. Manufacturer / OEM
4. Manufacturer’s Rep
5. Contractor / Integrator
6. Other (please specify)

Most of the respondents (88%) are employed by EGSA Member Manufacturer/OEM and Distributor/Dealer companies. The total number of survey respondents was 78. (Figure 1)

**Figure 1**

**Question 2**
Which of the following best describes your position?

1. Owner
2. Executive
3. General Manager
4. Sales
5. Marketing
6. Operations & Manufacturing
7. Engineering
8. Product Management
9. Other (please specify)

Most individual participants (46%) are in executive management related positions. (Figure 2)

**Figure 2**

**Question 3**
What were your company’s estimated power generation related sales (engines, generators, switchgear, ATS, UPS, controls, accessories, design, service, consulting, etc.) in 2010?

Less than $4 million
$5 to $10 million
$11 to $20 million
$21 to $30 million
$31 to $60 million
$61 to $100 million
$101 to $500 million
Greater than $500 million

Nearly 45% of respondents reported they had less than $10 million in power generation related sales in 2010. Thirty-three percent (33%) of respondents reported power generation related sales were greater than $30 million. (Figure 3)

**Figure 3**

**Question 4**
Which of the following best describes your company’s anticipated 2011 power generation related sales growth (or decline) over 2010?

1. Greater than 51%
2. 31% to 50%
3. 21% to 30%
4. 11% to 20%
5. 4% to 10%
6. +/- 3% (Relatively flat)
7. -4% to -10%
8. -11% to -20%
9. -21% to -30%
10. -31% to -50%
11. -51% or more

A total of 67 companies or 86% anticipate growth.
A total of nine (9) responding companies or 11% anticipate relatively flat sales in 2011 in comparison to 2010.
A total of two (2) responding companies or 11% anticipate sales in 2011 to decline.
The one (1) respondent identifying 50% or more decrease in sales was due to regional market dynamics, including 2010 was a record year in sales. (Figure 4 on next page)
Question 5
Which of the following best describes your company’s employee growth (or reduction) in the PAST 6 months?

1. Greater than 51%
2. 31% to 50%
3. 21% to 30%
4. 11% to 20%
5. 4% to 10%
6. +/- 3% (Relatively flat)

Overall, 35 EGSA members (44%) reported relatively no change in staffing levels.
Forty-one (41) respondents reported employee increases.
Three (3) companies reported employee reductions. (Figure 5)

Question 6
Which of the following best describes your company’s employee growth (or reduction) in the NEXT 12 months?

1. Greater than 51%
2. 31% to 50%
3. 21% to 30%
4. 11% to 20%
5. 4% to 10%
6. +/- 3% (Relatively flat)
7. -4% to -10%
8. -11% to -20%
9. -21% to -30%
10. -31% to -50%
10. -51% or more

Fifty-five (55) respondents reported plans to increase employees. (Figure 6)

Question 7
Please rank the following markets 1 to 11 in the order of their importance to your company with “1” being the most important and “11” being the least important.

The market importance level indicates where EGSA members focus their engineering, sales and marketing efforts. Please note that these levels are “of the moment” and do not necessarily indicate a company’s ongoing or future marketing strategy. (Figure 7)
Question 8
Please indicate your company’s estimated 2011 power generation sales growth (or decline) over 2010?

Eighty-six percent (86%) of respondents expect growth in 2011. (Figure 8)

<table>
<thead>
<tr>
<th>Market</th>
<th>Answer Options</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>Greater Than 50%</td>
<td>1 1 6 7 23 24 3 1 0 0 0 3 69</td>
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<tr>
<td>Construction</td>
<td>0 0 5 6 21 26 5 1 1 0 0 0 4 69</td>
<td></td>
</tr>
<tr>
<td>Data Center</td>
<td>2 0 6 13 23 18 0 1 0 0 0 7 70</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>3 0 4 8 18 28 1 1 0 0 0 8 71</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>1 1 5 18 21 19 4 0 0 0 0 3 72</td>
<td></td>
</tr>
<tr>
<td>Marine</td>
<td>0 0 1 5 11 22 3 2 0 1 1 24 70</td>
<td></td>
</tr>
<tr>
<td>Military Government</td>
<td>1 1 3 10 22 19 1 1 0 0 0 12 70</td>
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<tr>
<td>Oil &amp; Gas</td>
<td>1 3 3 12 13 18 2 0 1 0 0 17 70</td>
<td></td>
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<tr>
<td>Renewables</td>
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<td></td>
</tr>
<tr>
<td>Rental</td>
<td>2 4 3 13 16 17 3 2 0 0 0 10 70</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>0 1 1 6 8 26 2 2 0 0 1 21 68</td>
<td></td>
</tr>
</tbody>
</table>

Question 9
How do you think the Tier 4 interim (engines 175 hp and greater) emissions changes will affect your business over the next 12 months?

Seventy-seven percent (77%) of the respondents believe Tier IV Interim will have either “some effect” or a “significant effect” on their business. (Figure 9).

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Count</th>
</tr>
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<tbody>
<tr>
<td>Not applicable to my business</td>
<td>6.4% 5</td>
</tr>
<tr>
<td>No effect</td>
<td>6.4% 5</td>
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<tr>
<td>Some effect</td>
<td>39.7% 31</td>
</tr>
<tr>
<td>Significant effect</td>
<td>37.2% 29</td>
</tr>
<tr>
<td>We are not sure how it will affect our business</td>
<td>10.3% 8</td>
</tr>
</tbody>
</table>

The raw voice of customer survey explanations of the Tier IV Interim effects include the following:

1. It destroyed the diesel peaking market. It will increase our sales volume for after treatment for projects that can bear the cost.
2. More expensive, also the physical size of the units is changing which will affect retro fits inside existing buildings.
3. Those that need engine driven generation will still need it, legally mandated will still need to be purchased. All manufacturers are in a similar situation as far as increased cost and in reality on a major project the overall cost increase should not affect the budget to the point where the project wouldn’t go forward.
4. Will increase the price of product, making those bidding on it higher than those bidding on Tier 3 packages. Expect to see new product issues with this technology being used in a standby application.
5. New products and processes. Complete learning curve on manufacturing, quoting, delivery, performance
6. New business opportunities and higher sales $ per ekW
7. Our ability as an OEM to design and launch our portfolio on time.
8. Customer acceptance of the significant cost and technology hurdles associated with T4i.
9. Cost and weight of product
10. Lack of product to meet Tier 4i. Therefore no sales.
11. This may require us to change our designs in a way that will accommodate emission control equipment. Not a big deal though.
12. High cost of rental units and higher rental rates
13. Added expense for end users will cause distress and put off buying decisions for some. Cost of power projects will go up. Companies may have to redesign equipment to facilitate added filtration and after treatment.
14. Everyone is still confused and there is no clear message... The folks at the individual states don’t even know what to say for our industry. It changes depending on who you talk with.
15. Compliance
16. Some will go electric.
17. Costs Go Way up On Large Installation Double Cost
18. Training will be required.
19. Very costly emission controls
20. Limits the number of products
21. Expect some effects, but there is still no consensus on our team regarding the Tier4i impact.
22. Increase complexity of packaging and increase dollars of some transactions
23. It will raise the price and make projects less doable as well as limit available product for resale.
24. As standby systems will be allowed to run at Tier 3 levels. This shouldn’t have a huge effect but the interest in what is going on will increase consulting. Not a lot of diesel generation running prime in CA - as rental isn’t a huge part of our business.
25. Misinformation and fear will drive T4i to applications that may not need it
26. Product shifts
27. It requires all of our focus
28. This will add significant cost to a generator set. Getting funding for a project may become more difficult in the future. Getting approval once a project is installed may be the next difficult hurdle.
29. May need to find replacement engines for our current fleet of generators.
30. More consultative work. More custom engineered projects.
31. We supply & service emissions control products.
32. +- 10% of our business is outside the Standby market
33. Should open up a number of opportunities for service and replacements
34. Tier 4 introduces cost which will affect project decisions
35. ENGINE CONTROLS AND TRAINING NECESSARY TO CALIBRATE THE ENGINES; FIELD ADJUSTMENTS
36. Tier 4 is causing our company to completely redesign our products.
37. Additional and redesigned cooling requirements.
38. All prime power applications will need to be T4i. About 10% of overall business.
39. We do not supply to that area of the Gen Package.

**Question 10**
The DOE & EPA are investigating methods to increase US CHP (combined heat & power). What policy changes could be implemented to help alleviate CHP barriers? The constructive answers will be forward to the DOE.

The raw voice of customer recommendations included the following:

1. Rebates
2. Emission relaxation to avoid cost of aftertreatment, etc
3. Make Interconnect easier rather than utilities have control and having own test requirements
4. Offer incentives for the increased efficiency that CHP would offer, at least enough to offset some of the costs of equipment to lower the customer payback time and make projects more feasible.
5. Don’t know. Volatility in fuel pricing seems to make CHP a challenge. CHP can be profitable one minute and not the next. This issue probably needs to be addressed.
6. Add some tax breaks or other incentives to promote R & D. Add incentives to incorporate CHP into buildings. Appoint a CHP “Czar” to create a confident arena for product development in this area. Apply the term “green” to this process as it stimulates ideas and value integration into the overall power planning process for the country. Remove all barriers to the use of approved fuel fired power producing when the result is also the usage of the heat that is the natural result of burning fuel of any type.
7. Get electric utilities to support.
8. Incentives for greater levels of CHP efficiency (similar to the EU model) would be a great place to start. Regional electricity costs should also be considered so this can become a nationwide program, not just a regional program. Too many potential CHP plants have fizzled in this country because the local electric company drops their pricing to the entity considering CHP.
9. Streamlining the interconnect process so that utilities are open to these systems on their grid and won’t charge excessive fees putting these systems’ viability in jeopardy.
10. Recognize, measure and reward the offset from reduction of onsite gas/energy consumption by utilizing CHP. This isn’t done for carbon footprint nor do the local air boards account for this substantial improvement in carbon reduction. Recognize the total carbon impact cradle to grave of CHP compared to other technologies not just a balance sheet moment in time approach.
11. Financial subsidies and Performance Contracts
12. Perhaps reward these customers with extra FLEX credits, or tax incentives, allow for special rapid permit approval
13. Natural gas fired plants are going to be more popular than coal or heavy fuel fired plants. Import less natural gas and utilize the resources available within the US.
14. Refocus existing tax and regulatory incentives away from traditional, established markets and products and toward emerging technologies that reduce fossil fuel consumption.
15. Emissions and reporting
16. Financial incentives to invest in CHP systems - thru government/utilities.
17. Credit riders of some kind to help offset cost, Less paper work to satisfy all concerned parties
18. Standard interconnect standards. DOE policy that supports CHP systems through utilities (today penalties for demand charges may not support CHP as well as could be).
19. Force utilities to agree to an intertie standard. IEEE 1547 is only a recommended standard. That would open the door to a lot more CHP
20. The increased independence on standby power generation in all markets has made getting compliant engines into the field difficult. If the units are classified as peak shaving devices (generally at a large corporation), they have been restricted more with stringent regulations due to the time running and producing that are being scrutinized as the ozone depleting matter. However, if business could get
reduced restrictions, this might encourage the purchase of generators for use at a business (non-critical applications) which can be used in conjunction with the local utility to help with the grid demands during peak seasons.

21. Creating monies and/or awards towards innovation.
22. Utility interconnect (IEEE 1547) and acceptance.
23. Letting owners of CHP have a significant incentive to help take pressure off the grid in times of peak demand and the addition of smart meters and controls.

**Additional comments regarding the power generation market?**

1. Continued opportunity for two reasons; first, the demand for electricity continues to grow and second is the fact that it needs to be very reliable.
2. Hopefully we will see greater growth in what appears to be an improving economy.
3. This upcoming meeting in March is all good, but one thing to remember... From the renewable side, solar and fans don't produce emergency power, cost more and have a long pay off period. Plus, if there are agreements with the utility, they will always need a fueled generator.
4. Keep up the good work.
5. Incentives for reciprocating CHP should be reinstated in CA and elsewhere where less effective renewables - in terms of real carbon reduction - are provided large incentives. Implement cradle to grave energy measurements to include transportation - This will benefit US manufacturers for the domestic market.
6. There needs to be stimulus for colleges to re-instate power generation education within the Engineering schools. There is a huge deficit of new/graduating talent available for the power generation sector.
7. There needs to be more investment in research and development from the large corporations, especially in renewable energy and intelligent power distribution.
8. Still growing, not as lucrative as years past
9. Have some concerns that public spend projects (stimulus/others) are coming to an end, and, private investment still lags in North American market
10. Wind will soon blow out unless a good storage option comes along. The carbon savings just are not there.
11. We saw an increase start in June of 2010
12. 2011 and 12 are shaping up to be tremendous years; backlog up over 75% from same period one year ago.
13. Let peak shaving be an answer to the taking the pressure off the grid to stop rolling brown outs and black outs.