



Committee Meeting Agenda & Minutes

Market Trends

Committee Meeting Objective: The Committee provides a forum for market trends within the power generation industry to be discussed and analyzed.

Date and Time: Monday, September 18, 2017

Location: Minneapolis

Time: 3:00 - 5:00p.m.

Chairperson: Joe Zirnhelt

Item	Description
<p><i>Welcome & Introductions</i></p> <ul style="list-style-type: none"> • Welcome • Committee leaders introduced 	<p>Leader: Joe Zirnhelt 5 Minutes</p>
<p><i>Review Committee Initiatives</i></p> <ul style="list-style-type: none"> • Committee initiatives and charter reviewed • Attendees encouraged to provide topic for committee discussion • Recommendation made to move MT Committee meeting as to not be in conflict with DD subcommittee 	<p>Leader: Justin McMahon 5 Minutes</p>
<p>Trends for CHP & Natural Gas Gensets</p> <ul style="list-style-type: none"> • Concepts and Design <ul style="list-style-type: none"> ○ CHP Defined and benefits reviewed ○ Modes of operation reviewed (grid parallel, island and black start) ○ Best applications for CHP reviewed to include fuel sources ○ CHP sizing criteria discussed (electrical and thermal requirements) ○ Overview of emissions requirements ○ Project development criteria discussed ○ Elements of economic analysis reviewed • Case Study <ul style="list-style-type: none"> ○ Casino CHP was basis of case study ○ Overview of casino provided ○ Project P&ID as well as plant components reviewed ○ Overview of plant efficiency of 83% ○ Currently 17K+ hours on plant and 15MM kWh produced ○ Savings and payback period reviewed ○ Overview of project lessons' learned • CHP Market Outlook <ul style="list-style-type: none"> ○ Market outlook reviewed (U.S. DOE CHP Deployment program) 	<p>Leader: Gary Farmer, MTU Onsite Energy Corporation 30 Minutes</p>

<p>2016); Key markets verticals reviewed</p> <ul style="list-style-type: none"> ○ Minnesota regional market review provided ○ Combined Heat and Power Technical Potential in the US (March 2016) cited 	
<p>Pulse Survey</p> <ul style="list-style-type: none"> ● Review preliminary results from Fall 2017 survey ● Jeff Webb from ESSE summarizing results; only EGSA staff able to review raw data. Individual survey results not provided to EGSA members. ● Survey criteria reviewed ● Largest number of respondents since 2012. ● Survey results being tabulated ● Audience encouraged to participate 	<p>Leader: Jeff Webb, ESSE 25 Minutes</p>
<p>Hurricane Trends discussion</p> <ul style="list-style-type: none"> ● Florida – Ft. Lauderdale – some houses still without power one week after hurricane ● 80% of people in state of Florida lost power with power still being restored to some areas more than 1 week later. ● Texas – took ~2 weeks for all roads to be passable ● Power was on in some areas of Houston until some houses started burning down and then power was shut off to local areas until the situation could be assessed. ● Point was raised how Sandy changed the industry with respect to how CHP is designed and sold. <ul style="list-style-type: none"> ○ Conventional thinking was that CHP systems would be shut down during natural disaster but now it is thought of as being able to in island mode during a prolonged outage period ○ NYSERDA has CHP program where new requirement (post Sandy) is to be able to go to island mode rather than shut down CHP system to help lighten load on the utilities. ● Governor of Florida made recent proclamation (after Irma where several patients died in nursing home from lack of AC) that all Florida care facilities must be able to maintain “comfortable conditions for 96 hours on generator power” and these changes need to be implemented within 60 days. Such a mandate could have an immediate impact on the backup power market that will be a challenge to fulfill as there are over 10,000 care facilities in Florida. <ul style="list-style-type: none"> ○ Meeting tight timelines for upgrading Florida care facilities are not likely due to supply chain. For example - current lead times on ATS are around 12 weeks. ○ Summary: We will be seeing more migration from only “life safety” systems to also include climate control into critical loads. 	<p>Leader: Chris Nagle 25 Minutes</p>

<ul style="list-style-type: none"> • Issues discussed with the levels of flooding seen with Irma and Harvey and regulations lacking for placement of the genset installation as far as elevation. Key question to be answered in next months: are there going to be changes to installing genset into low elevation areas? • Gas stations that have standby generators may have distinct advantage in storm – but in the case of Irma and Harvey no gas stations had any gasoline left to pump! 	
<p>Open Discussion: general discussion & topics of interest for Spring 2018 conference in Albuquerque</p> <ul style="list-style-type: none"> • Topics suggested <ul style="list-style-type: none"> ○ Remote monitoring – covered during Spring meeting ○ Post Irma and Harvey follow-up. What has materialized in the industry as far as new regulations/lessons learned (Jessica (FL) and Nic Phillips (TX) may present updates from Florida and Texas respectively) ○ What happens to electric vehicles when power goes out (topic for Albuquerque for EGSA is “Lighting the Dark Desert Highway”). ○ Energy Storage combined with generator sets – recent promotion in utility scale and power generation in general ○ Discussion of windmills in hurricanes ; can the power be harnessed ○ Seismic compliance for industry; ballpark pricing, options • Suggestion made to have PA system for future meetings 	<p>Leader: Joe Zirnhelt 20 Minutes</p>
<p>New Business</p> <ul style="list-style-type: none"> • No old or new business discussions suggested 	<p>Leader: Joe Zirnhelt 10 Minutes</p>

Action Items *(additional space on back)*

Item	Person Responsible	Deadline
Discuss with board new time for MT Committee meeting in order to encourage participation from distribution Group	Justin McMahon	
Suggestion made to open survey up for 1 more week and put last push for more respondents. Suggestion made to set up laptop for people to complete surveys at meeting	Justin McMahon	
Have PA system for future meetings – request on AV	Joe Zirnhelt	Spring 2018

request form		
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Market Trends Committee Mission Statement:

This 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. Beyond discussion, the Committee has the responsibility and ability to develop and make recommendations to the Board 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.