From: Galvin, Michael J.

Sent: 12/13/2011 12:54:41 PM

To: Hughes, John (Reg Rel) (/O=PG&E/OU=Corporate/cn=Recipients/cn=J8HS)

Cc:

Subject: FW: Demand response: The current state of the marketplace

#### John,

Is thisyour second job - VP Technical affairs for EnerNOC?

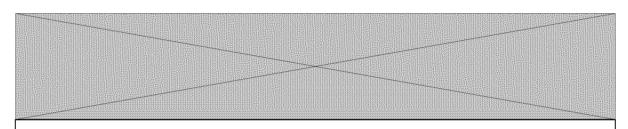
**From:** James Downing [mailto:jamesdowning@restructuringtoday.com]

Sent: Tuesday, December 13, 2011 11:41 AM

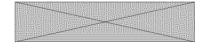
To: Galvin, Michael J.

**Subject:** Demand response: The current state of the marketplace

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# The Future of Demand Response: How High Can It Go?



## **YOUR PRESENTERS:**

- Robert Borlick, Independent energy consultant
- · Aaron Breidenbaugh, Director of Regulatory Affairs, EnerNOC
- · Ahmad Faruqui, principal, the Brattle Group
- · John Hughes, vice president of technical affairs, ELCON
- Rich Quattrini, vice president of marketing and business,
   EnergyConnect
- James Downing (moderator), editor, Restructuring Today

Demand response (DR) has proven to be a critical resource for grid operators and utilities. It has gone from being used in small, emergency programs to being a dominant new resource in existing capacity markets.

There are several factors spurring the growth of DR, including an increased demand for electricity and the need to improve energy efficiency. In addition, new technologies such as smart meters are opening up a new world of DR opportunities.

The most recent capacity auction in PJM used DR to meet 9.4% of the RTO's capacity needs for 2014/2015. Once FERC's Order 745 is in place, this resource should significantly increase in energy markets as well. Even its strongest critics agree that demand response plays an important role in balancing supply and demand in today's organized markets.

But how high can it go? A FERC report from two years ago found that DR could meet up to 20% of peak demand in the US. On the one hand, some generators and others in markets where DR has experienced significant growth have concerns about market saturation. But DR aggregators argue that even PJM is far from saturated and the aggregators plan to continue growing their business beyond traditional demand response by applying their practices to energy efficiency.

What are the investment opportunities available in DR? Can money still be made from those investments? How much DR can the grid rely on while still being reliable?

Get answers to these questions and more when you join *Restructuring Today* for its latest webinar "**The Future of Demand Response: How High Can It Go?**" on Thursday, December 15, 2011. Listen as our panel of industry experts examines the current state of the DR marketplace and how it compares to traditional generation. You will come away with a better understanding of the future of this industry and the debates that are shaping it now. This webinar will explain what it will take for DR to reach its full potential and what is holding it back.

Whether you are a utility executive, regulator, ISO/RTO rep, demand-response service provider -- or anyone who wants to better understand the future of demand response -- this is one session you cannot afford to miss.

Best of all, you and your entire team can participate in this webinar for one low flat fee of only \$197 per dial-in site. You can even ask your own questions and get advice from our experts, tailored to your specific needs, when we open up the phone lines for live Q&A from the audience.

#### **RESTRUCTURING TODAY WEBINAR AT A GLANCE**

DATE: Thursday, December 15, 2011

**TIME:** 2 p.m. EST; 1 p.m. CST; 12 p.m. MST; 11 a.m. PST

PLACE: Your telephone or speakerphone and computer

**COST:** \$247 per dial-in site (unlimited attendance per location)

TO REGISTER: Click here or call 1-888-637-7776

# Here are some of the questions you will get answers to when you attend this in-depth, 90-minute webinar:

- What demand response programs exist today?
- What is the ceiling for demand response?
- Have we gotten to the DR ceiling yet? If not, what will it take to get us there?
- How will DR firms grow when the cap has been reached?
- What are the drawbacks to relying too much on DR?
- What are the factors that could either drive or prevent the growth of DR?
- How much of the future of "demand response" lies in smart meters and the response to prices versus the "supply" resource that has taken off in ISO/RTO markets?
- · ... and much more!

#### Your webinar registration includes:

- A site license to attend the conference (invite as many people as you can fit around your speakerphone at no extra charge).
- PowerPoint presentations from our speakers.
- The opportunity to connect directly with our speakers during the audience Q&A session.

Register Now! Or for more information, call us toll-free at 1-888-637-7776.

### **Distinguished speakers**

Robert Borlick is an independent energy consultant with more than 30 years of experience related to the electric power industry. He previously held partnerlevel positions in two international consulting firms -- Putnam, Hayes & Bartlett and Hagler & Bailly -- and until recently, was a senior advisor to the Brattle Group, Since 2005, Borlick has been advising the Midwest Independent System Operator on the design and implementation of its demand response programs. Over the past 20 years, he has focused on wholesale electricity market design, beginning with the restructuring and privatization of the England-Wales electricity industry. He also participated in designing electricity markets in Australia, Canada, Colombia, El Salvador, India, Indonesia, New Zealand, Philippines, Poland, Russia, Singapore and the US. Borlick received a bachelor's degree in electrical engineering from the Illinois Institute of Technology and a master's degree in electrical engineering from Ohio State University where he was a Mershon Fellow. He also earned a Master of Business Administration from the Stanford Graduate School of Business where he was a Lockheed-Gross Fellow.

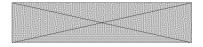
**Aaron Breidenbaugh** is the director of regulatory affairs at **EnerNOC**. He represents EnerNOC before the NYISO and PJM stakeholder bodies, before the public service commissions and other regulatory bodies in New York, New Jersey, Pennsylvania and Florida, as well as the Federal Energy Regulatory Commission (FERC), the North American Energy Standards Board (NAESB) and the North American Electric Reliability Council (NERC). Prior to joining EnerNOC, Breidenbaugh was the program coordinator for the New York Independent System Operator (NYISO) where he was in charge of the day-today operation of the NYISO's demand response programs. Prior to that, he was executive director of the Price Responsive Load Coalition, a trade association representing demand response interests in the Northeast. The first ten years of his career were spent at the Independent Power Producers of New York, the state's IPP trade association where he finished his term as the association's deputy director and director of regulatory affairs. He holds a master's degree in science and technology studies, with a specialization in energy policy and a bachelor's degree in nuclear engineering from Rensselaer Polytechnic Institute.

**Ahmad Faruqui**, Ph.D., is principal at the **Brattle Group**. He is an expert on the customer-facing aspects of the smart grid. Faruqui has performed costbenefit analyses for electric utilities in two-dozen states and testified before a

dozen state and provincial commissions and legislative bodies. He has designed and evaluated some of the best-known pilot programs involving dynamic pricing and enabling technologies and his early experimental work with time-of-use pricing is cited in Bonbright's canon. Faruqui is author, co-author or editor of four books and more than 150 articles, papers and reports. He holds a doctoral degree in economics from the University of California at Davis.

**John Hughes** is vice president of technical affairs at the **Electricity Consumers Resource Council (ELCON)**, the national association of large industrial consumers of electricity. He is responsible for managing ELCON's interventions before FERC, DOE and related state regulatory bodies. He is also author of ELCON policy papers and technical documents on all facets of the electric industry. He joined ELCON in 1987 as technical director after serving as director of economic research at the Niagara Mohawk Power Corporation. He was previously associate director of corporate planning. Prior to joining Niagara Mohawk in 1982, Huges was chief economist at the Massachusetts Energy Facilities Siting Council.

**Rich Quattrini** leads marketing, product management and strategic partner development at **EnergyConnect**, a Johnson Controls Company. He is focused on product strategy and integration of EnergyConnect technology with the diverse portfolio of Johnson Controls products and services. Through these efforts, EnergyConnect drives its vision to make active demand management an integral part of their customers larger energy-efficiency strategy within the context of their business and operational realities. This increases overall benefits for both utilities and customers as opposed to simple capacity DR resources that only contribute when dispatched a few times a year. Quattrini joined EnergyConnect in 2007 and has more than 20 years of experience in sales, marketing and customer engagement in the semiconductor equipment industry. He earned a bachelor's degree from Rochester Institute of Technology and a master's degree in engineering management from the University of Massachusetts at Amherst.



**Restructuring Today's mission** is to deliver exclusive news chronicling ongoing efforts to open competitive wholesale and retail energy markets with indepth analysis on why some fail and others succeed.

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