

Retrofitting generators with emissions controls can create revenue

June 23, 2015 - Green Buildings

Participating in utility and ISO-level demand response (DR) programs is an excellent way for building owner/operators to earn money while minimizing congestion-related power outagesâ€"helping maintain the health of the regional electric grid. For many building owners, utilizing existing gensets to participate in DR makes the most senseâ€"this approach is one of the most effective and easy ways to curb load during DR events, and has zero impact on employee or tenant comfort.

However, compliance with federal, state and local air quality regulations is an important consideration for building owners interested in enrolling these gensets into DR programs. To ensure compliance, building owners and operators must make sure their backup generators are properly retrofitted with appropriate emissions control technologies before enrolling in DR programs.

For most generators, installing selective catalytic reduction (SCR) technology will be needed to control NOx, in combination with a diesel particulate filter (DPF) to control particulate matter (PM) emissions. In other instances, combining cooled exhaust gas recirculation (EGR) upgrades with a DPF can achieve the required emissions reductions without the installation of an SCR. By drastically reducing the pollutants emitted during operations, these control upgrades enable emergency generators to be re-classified, allowing owner/operators to enroll them in lucrative DR programs.

These control measures can be easily installed, unlocking annual revenue streams of up to \$250,000 per MW if the modified generator is simultaneously enrolled in NYISO's Special Case Resources program as well as Con Edison's CSRP and DLRP programs. With the retrofit typically running in the low six figures, the upfront cost is more than justifiedâ€"it transforms emergency generators into cash flow-positive assets in under a year, helping resilience payâ€"year round. Oisin O'Brien is director of research & data analytics at GridMarket, New York, N.Y.

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