

**DEIS comments submitted by Friends of Responsible Energy
25 April 2003, Docket 05-CE-121**

1. The health risks of fine particulates ($PM_{2.5}$) to children and hospital patients, even at ambient levels, are barely treated in the DEIS. As one indication of the severity of the problem we note that the incidence of asthma in Madison schoolchildren has tripled since 1987. We would therefore appreciate a deeper assessment of those risks, using some of the published research linking $PM_{2.5}$ to asthma, cancer, and heart disease. Please dollarize the costs of asthma as well as cancer and heart disease resulting from fine particulates in Madison, measured in hospital visits, treatments, and time lost or lives shortened.
2. Please justify from a public health standpoint how the modeled annual $PM_{2.5}$ level of 14.36 ug/m^3 , can be considered acceptable when California has considered the health risks and set a standard of 12 ug/m^3 . Note that the ambient level, even before the addition of MGE's proposed 150-MW facility, exceeds the California standard. Should our children be afforded less protection than California's children?
3. Further with respect to area emissions and the consideration of alternatives to the 150-MW proposal, the operating economics of a smaller, true cogeneration plant would reduce the dispatching of the coal-fired plant at Charter Street and therefore reduce that plant's air pollutants. We suggest this potential improvement in air quality be described and quantified in the FEIS.
4. Why does MGE favor a lease/generation arrangement when the cost to ratepayers under that arrangement appears to be approximately double the cost of a traditional arrangement? Shouldn't this comparison be made more prominent in the FEIS so that the general reader is immediately aware of it? For example, should it appear in the Executive Summary? Regardless of any complex exchange agreements between UW and MGE, MGE as the sole applicant and owner of the facility should implement the traditional arrangement.
5. The lease/generation arrangement apparently results in the profits from opportunity sales to other utilities benefiting MGE investors rather than ratepayers. Can the neighborhood be assured that the plant will not be used as a peaking plant for opportunity sales and thereby add noise and pollution in the middle of Madison for the benefit of MGE investors? Can the neighborhood be assured that opportunity sales will not occur when fuel oil is burned?
6. Since it appears that the MGE proposal does not accommodate campus steam load growth beyond 2011, the FEIS should examine other alternatives for how well they meet these loads. A planning horizon of only 8 years for a \$176.5 million facility with an expected life of 40 years defies common sense. The FEIS should thoroughly discuss any limitation in land or air/water permitting of future UW heating plant expansion options resulting from locating the 150-MW MGE facility on the site.

7. Will a new air quality permit be required if and when MGE decides to increase steam capacity by 100,000 lb/hr “with some minor system modifications” (DEIS, page 60 DEIS)?
8. The noise section concludes that noise levels will increase in the adjacent neighborhood. The area is already burdened with noise from University Avenue and Campus Drive, as well as air handlers in UW buildings, the VA hospital and Forest Products Lab. Residents currently complain of broadband and tonal noise from the existing UW heating plants and cooling towers at Walnut and Charter Streets. Even with all these existing sources, the MGE’s model predicts the plant will still add sufficient noise to result in an increase of 2-4 dBA and 6-7 dBC in the neighborhood. MGE's Noise Assessment predicts a plant generated sound pressure level (SPL) of 47 dB at 2218 Kendall (1000 ft from plant). The MGE plant produces more noise than the combination of all other sources of nighttime noise at this location (47 vs 46 dba). In other words, the plant will not only increase noise, it will be the dominant source of noise. Madison noise ordinances are therefore inadequate as an operative standard of judgment. In addition, noise pollution as experienced by human residents should be investigated and considered, with particular attention to whether they will hear the plant when existing sources are at their most quiet levels, such as Campus Drive late on a summer night.
9. A plant with the same two LM6000 turbines was constructed by Northland Power in Iroquois Falls, Ontario.
http://www.atconoise.com/mediaroom/mediaroom_tech_northland.htm Northland’s sound level declines to 40 dBA at 750 feet while MGE’s requires 1800 feet before it declines to the same 40 dBA. Are the Northland plant’s sound mitigation measures superior to MGE’s? If so, why hasn’t MGE deployed similar measures?
10. The Unattenuated Noise Levels table in the URL above shows that the equipment generates very high noise levels at low frequencies. Low frequencies are the most difficult to attenuate. For example, the RockGen plant near Cambridge in Dane County was approved by the PSC, but neighbors 1800 feet away suffer from severe low frequency vibrations. MGE must do a better job of attenuating low frequency noise for Madison. We ask that additional noise mitigation be employed. We also ask that an enforcement protocol be implemented by the PSC that requires MGE to solve noise problems that are objectionable to residents.
11. Has the noise analysis anticipated anomalous factors that could lead to unusual amplification, reflection, or echoing? We are concerned about unforeseen manifestations, such as occur on the eastern edge of the Regent neighborhood since the construction of UW’s Engineering Centers, whereby PA announcements at Camp Randall are now distinctly heard twice, the second time as a loud echo off of Engineering Centers. Is it reasonable to expect noise from the plant to propagate large distances over Lake Mendota under certain lake or atmospheric conditions?

12. Please provide information about the difference between normal operating sound levels versus startup and shutdown sound levels as they will be perceived by nearby residents as well as students at Lakeshore Dormitories and users of the Lakeshore Path. Also please estimate the frequency and duration of these startup and shutdown events.
13. As part of the economic effects, should the FEIS consider the effect on property values of the 150-MW proposal? There has already been at least one neighborhood home sale because of child asthma concerns. Are there property value models that can be applied to the problem, for instance by taking the aggregate assessed value of homes within _ mile of the plant and projecting an average percentage decrease in value attributable to buyer reluctance?
14. We would appreciate a description of the extent of ecological damage, short and long term, to the Lakeshore Path due to pipe-laying construction. Similarly, please provide a description of the extent and duration of aesthetic loss from this construction.
15. Does the Lakeshore Path have a dollar value to the state, the campus, or its users, and can it be converted to a leased value? If so can the monthly value be used to dollarize the disruption from loss of use during the construction period?
16. An MGE facility ranks among the top 20 terrorist targets in the county. Would the proposed 150-MW facility, because of its proximity to neighborhoods, dormitories and hospitals, be another one of the top 20? Please characterize and dollarize the risks from either intentional or accidental:
 17. Gas leaks or explosions
 18. Fuel oil spills or fires (495,000 gallons)
 19. Release of ammonia (10,000 gallons)
 20. Release of sulfuric acid (5,000 gallons)
 21. Any other catastrophic hazards known to accompany large power facilities
 22. In view of pipeline explosions and tanker truck spills we would also appreciate an assessment of transportation risks associated with natural gas, fuel oil, and ammonia, as well as any other hazardous materials used by the plant.
23. We are baffled by the absence of an analysis of water source, loss mitigation, and costs as well as the parties paying for these costs in the DEIS. Since water is a fundamental element for the operation of the plant, how could the CPCN application even be ruled complete several months earlier, when presumably even less information about water had been submitted?
24. Similarly, the contracts detailing the financial arrangements between UW and MGE have been released to neither the public nor Commission staff, even at this date. Without these agreements it is impossible to allocate the costs of this facility between state taxpayers and MGE ratepayers and we therefore again find it incomprehensible that MGE's application could have been determined to be complete in the first place.

25. In view of the preceding two paragraphs we ask that the completeness determination be revisited. By prematurely determining that an application is complete the Commission starts a 180-day clock toward automatic approval should the Commission be unable to finish the task of evaluating the application. This unfairly shifts the burden of proof from the applicant to the Commission, its staff, and the public.
26. Have the costs of ATC transmission system upgrades attributable to this project been included in the project's cost and the ratepayer analysis? ATC's Generator Interconnection Study Report for GIC029/GIC049 dated August 27, 2002 includes the following: "The total cost estimate of all Required System Upgrades is \$12,730,000. If the reconstruction of East Campus and Walnut substations must be completed using GIS design, the total cost estimate is \$19,330,000. This cost is the responsibility of GIC029 since these upgrades are **due to the proposed generation addition.**" Since this expenditure only applies in the event MGE's 150-MW proposal is approved, we would assume that the costs would be charged exclusively to MGE ratepayers. Can you confirm this assumption, or will the rate increase be distributed instead across ATC's entire service area?
27. Please describe the effect on the viewscape from additional perspectives, including the view of the stacks from above in University Heights in winter when the trees are bare. Shouldn't Figure 6-38 include a simulation of the plant? What about Figure 6-36? Are there models that can dollarize the effect of degraded viewscales? If so, we would like to see these figures.
28. With respect to the volatility of natural gas prices, is there a stipulation that the fuel oil can only be used when there is a malfunction that prevents natural gas from being used? In other words, can Commission staff confirm that fuel oil may not be burned merely because natural gas prices are high? Can staff further confirm MGE's statement that emission control systems would be damaged and cost more than \$1 million to repair if it were to burn fuel oil for more than a few days? If so will MGE commit on this basis to limited burning of fuel oil?
29. Please evaluate the environmental impacts of up to 35 fuel trucks per day that would be needed to supply the plant if fuel oil is used.
30. Is it appropriate in the FEIS to provide further details of alternatives that were studied, recommended, but then ignored? Shouldn't the merits of those alternatives be weighed? They bear on campus utility requirements that the DEIS considers. Obvious among those is for example the Burns & McDonnell recommendation for a 45-MW true cogeneration facility. Since that alternative, funded by the state and providing electricity for the campus, would have cost MGE nothing but have reduced its customer demand, wouldn't there be a salubrious effect on MGE ratepayers? Ordinarily, when demand drops, prices drop too. At the same time, significant downsizing of the campus as an MGE customer would presumably reduce revenues, which in turn would adversely affect MGE investors. Can you confirm that potential

adverse investor effects would not be compensated for by increasing customer electric rates? Finally, as another consequence, what would MGE's reserve capacity be if their system-wide demand drops by 45-MW? And wouldn't this reduce any real or imagined immediate need for additional generation or transmission?

31. The DEIS discusses renewables as an alternative to MGE's 150-MW proposal, and indicates that wind power is an especially viable alternative under assumptions of base or higher natural gas prices. In particular it appears from Commission staff's analyses that MGE's proposal is generally not the low-cost alternative. In view of additional costs that should be attributed to MGE but were not in the DEIS, such as transmission upgrades, the advantage of renewables over MGE's proposal should be even greater. Since renewables are environmentally friendlier and apparently more economical than MGE's proposal, we look forward to the final comparisons to be presented in the FEIS.
32. In view of the preceding two paragraphs, a case should be made in the FEIS for a small campus true cogeneration plant addressing campus electrical, steam, and chilled water needs in conjunction with wind or other renewable energy located elsewhere to address MGE's future electrical needs.
33. With respect to the section on Merchant Power Plants, we infer that MGE did not solicit power from the recently cancelled Muskego Energy Center, which El Paso cancelled because of the "inability to secure long-term power purchase agreements from regional utilities." Since MGE did not execute due diligence, failing to consider an obvious opportunity for purchasing power and contributing thereby to the demise of a competitor, we ask if its behavior is predatory and anti-competitive. Furthermore, we side with Commission staff in questioning whether "MGE can objectively analyze a proposal from its own affiliate" and ask that the FEIS thoroughly investigate purchase of wholesale power from an IPP as an alternative. Data for such an investigation would presumably include prices from the cancelled Muskego project.
34. Cancellation of the Muskego Energy Center calls into question the need for more capacity in the region. Are MGE's projected future loads reasonable in light of this development? Should these projections also be adjusted downward in keeping with nationwide economic conditions?
35. The following statement appears on pages xiv and 15; "it appears that the proposed site was identified by MGE because it was previously identified as the location for expansion of utility facilities on the UW campus and reserved for utility use in the UW's current Madison Campus Master Plan." This statement about the 4.5-acre site conflicts both with the two following paragraphs on page 15 and the actual Master Plan. The Master Plan actually shows that most of the site was intended for a parking garage. Please amend the FEIS so that the Commissioners are aware that only a small fraction of the site was intended for utility expansion in the Master Plan. If the Master Plan has binding weight, as MGE apparently believes it must by invoking it to justify

the location for its proposed plant, then the FEIS should be corrected to state that MGE's proposal in fact violates the Master Plan.

36. According to MGE's application, no other physical location for a 150 MW intermediate load plant has been considered. If the intent of alternate site specifications is to provide the public and the Commission a benchmark for comparison, why doesn't the DEIS consider the effects of a true, efficient cogeneration facility at the Walnut St. location? This is a rational alternative both because it is a better match for UW's needs and it reduces MGE's power demand immediately by about 7%, precisely in the area of Madison it has publicly said it most needs power.
37. We ask Commission staff to examine the interpretation of PSC 111.53(2)(b)1. This clause putatively exempts MGE from specifying alternate locations for a 150-MW intermediate load facility: "An application for a cogeneration facility may meet the requirement under sub. (1) (e) by filing information on 2 sites that are both located at the steam host's existing industrial plant, if the cogeneration facility will be a qualifying facility under 18 CFR 292.205 and none of the needed infrastructure improvements would constitute a major action significantly affecting the quality of the human environment under s. 1.11 (2) (c), Stats." However the words "existing" and "improvements" indicate that the clause applies if MGE's proposal constituted an upgrade or renovation of an existing facility, but does not apply to a brand new facility. For example, a cogeneration proposal for the existing Walnut St. heating plant would seem to be covered by the exemption, but MGE's 150-MW proposal for a new facility on a neighboring field would not. We therefore ask that two alternate sites for MGE's intermediate load facility be specified and analyzed in the FEIS.
38. With respect to the DEIS summary of public outreach, although information was released in December, 2000, that announcement specified a smaller, 90-100 MW plant that would require *no* capital expenditure from the state, as compared to the approximately \$80 million envisioned for the current 150-MW proposal. It is misleading to imply that the public has known of the current proposal since that time. Please correct the information in this section to reflect the time at which the public could reasonably be expected to learn about the current proposal.
39. The DOA deferred its obligation to prepare an EIS to MGE's CPCN application review process. Is part of that DOA obligation to consider 2 alternative locations, and if so, can DOA also legitimately defer that part of its obligation to the CPCN review process, which then seeks to bypass the obligation?
40. While the 150-MW proposal provides cogenerated steam, the proportion of electrical generation to steam generation is much higher than in true cogeneration facilities. We understand the fuel efficiency of this plant to be at maximum 70% and usually 45%, with the higher figure only achieved when it is cogenerating steam, which for most of the year it will not do. It would be useful for clarification in the FEIS to contrast these

figures with true cogeneration efficiencies, which we understand to be as high as 90% for most of the year.

41. We have reviewed Kurt Jacobsen's extensive DEIS comments on air quality modeling and find them to be highly competent, thorough and compelling, and we therefore register here our support thereof.