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Alan Lloyd, Chairman  
Environmental and Technology Advancement Advisory Committee  
Air Resources Board  
1001 I Street  
Sacramento, CA 95814

November 19, 2007

Dear Chairman Lloyd,

Enhanced Turbine Output LLC would like to submit this information for use in the draft ETAAC report, specifically addressing a technology that our company produces for augmenting the capacity of combined cycle and simple cycle natural gas turbines, and reducing toxic air contaminants and emissions of greenhouse gasses.

PowerCool™ is a technology based on the proven concept of supercharging gas turbines to increase their power output

What distinguishes PowerCool™ from prior successful implementations of supercharging is that instead of using a fixed-speed fan that can only augment the mass flow going into a turbine to a 'single value', PowerCool uses variable-pitch axial fans that can sustain the maximum safe mass flow into the turbine all year long. This means that during high summer temperatures and at high altitudes, where losses of efficiency and capacity are greatest, turbine capacities and fuel efficiencies are restored to improved original conditions.

Axial variable-pitch fans are a proven technology with over 50 years of successful implementation in literally thousands of applications.

By adding PowerCool™ to existing or new turbine systems, especially to combined cycle turbines, PowerCool can add power quickly, inexpensively and without the siting of new plants. Because combined cycle turbines have superior heat rates compared to simple cycle, this technology can reduce carbon dioxide emissions significantly, producing a 33% reduction compared to new simple cycle peakers, and more compared to older plants with poorer heat rates. Additionally, both capital and fuel costs will be lower.

The first chart on the next page illustrates that California can 'meet' all of its peak power demands and add baseload power with the implementation of PowerCool in combined cycle applications. The second chart shows that PowerCool™ provides much greater augmentation than other conventional technologies.

If implemented nationally, PowerCool could save 9 million tons of CO<sub>2</sub> per year --- California's avoided CO<sub>2</sub> could be, at minimum, scaled proportionally to that number.

We respectfully request that PowerCool™ be included in your ETAAC report as an important CO<sub>2</sub>-reduction technology in natural gas-fired electricity applications. Thank you for your consideration.

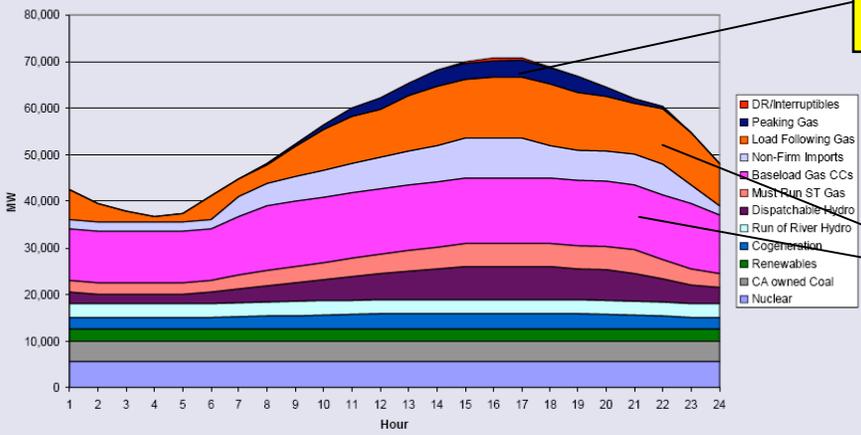
Regards,

*John S Hoffman*

John S. Hoffman  
CEO, Enhanced Turbine Output

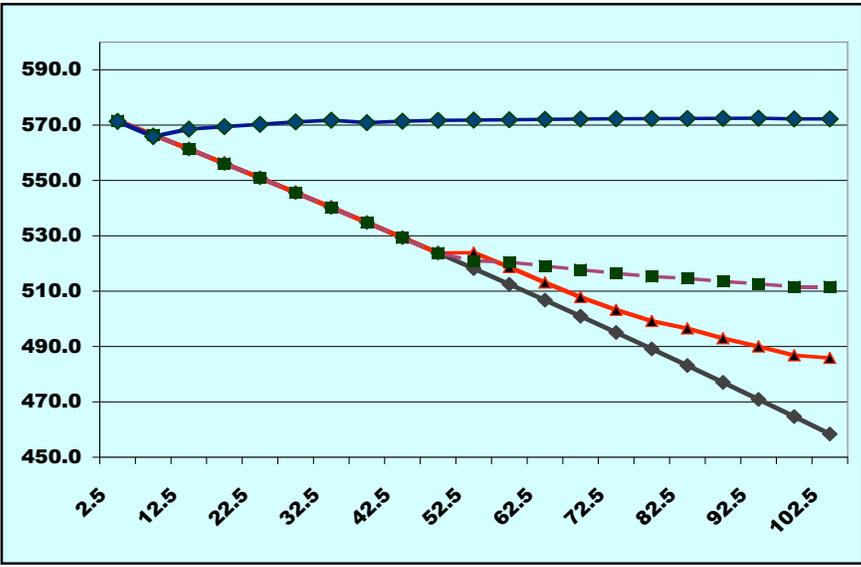
cc: Members of the ETAAC Committee

# Typical Peak Day Resources



Simple cycles are inefficient, polluting and expensive

Existing combined cycles can add capacity, displacing simple cycles



PowerCool on 2 on 1 Combined Cycle

Chiller on 2 on 1 Combined Cycle

Evaporative cooling on 2 on 1 Combined Cycle

Base without augmentation