MEGAWATT CONSULTING

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California Energy Commission
Dockets Office, MS-4
Re: Docket No. 10-IEP-1I
1516 Ninth Street
Sacramento, CA 95814-5512

Delivered via email to docket@energy.state.ca.us and via US Mail

Subject: 2010 IEPR Update - Manufacturing

MegaWatt Consulting, Inc., has been providing data center energy efficiency services to many of California's top Internet and technology brands. We lead the world with the most efficient data center design concepts, retrofits and industry thought-leadership and training to create the most efficient computer data centers while educating and leading the industry to greater energy efficiency. We helped to develop the industry's most common efficiency metric (PUE) and further refine this metric with US DOE and US EPA, as well as advance it with industry organizations in Europe and Asia. We also have led the effort and development of a USGBC LEED standard for data centers, as well as provided years of input and feedback to the development of the US EPA's EnergyStar ratings for computer hardware and data centers. Our services have touched nearly every one of the most efficient data centers in the world, including many leading efficiency projects in California. With offices in Silicon Valley, we work with high-technology companies from around California. We greatly value advancing energy efficiency for all Californians, the computer data center and other high-technology buildings and industries.

MegaWatt Consulting is providing this response to the request for public participation from the Commission to the Joint Committee Workshop on Clean Energy Manufacturing in California. We applaud the CEC for continuing to advance energy efficiency and renewable energy in California. We believe these advancements benefit all ratepayers and the unique needs of California businesses and households. However, we believe that specific energy efficiency programs to address the needs and uses of the high-technology industries in California are paramount to reducing energy use per capita and total power plant emissions in California while supporting the sate's economic growth engine.

The high-technology industry has very specialized buildings that consume far more energy per square foot than standard commercial office space in California due to their very unique needs, while energy-efficiency retrofits and good design in new buildings have shown significant reductions from standard operations. High-technology industries include solar cell manufacturing, chip and computer

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manufacturing, biotechnologies, computer data centers, research and development labs, renewable energy research and manufacturing, laboratories, computer technologies, aeronautical design, battery, electric vehicle and other leading and clean high-technology research and development industries. These industries share little information about energy efficiency improvements between competing companies and across industry segments. Furthermore, energy efficiency of the buildings is rarely a top priority of the engineers and operators of these high-technology buildings, as many have reliability, safety, and performance of the product they are supporting as top concerns. However, there is a ground swell of support for energy efficiency while most engineers and operators of these buildings are well informed about best operating practices and designs; a myriad of mis-information and conventional operating practices unnecessarily forces high-energy use.

We propose that to solve these and other challenges, a California High-Technology Building Center of Excellence will effectively provide high-technology building owners, operators, designers, engineers and architects with accurate information and modern techniques and designs that significantly reduce energy use.

California has a world-leading high-technology industry, accounting for a significant portion of the Golden State's GDP and private workforce. In California, there are several main groups of high technologies: Additionally, these combined industries have been growing over the last 5 years in energy use per square foot as well as private sector jobs. The objectives of this high-technology center of excellence are to lead significant energy reductions through promulgation of research via partnerships and other dissemination practices with industry, industry organizations and knowledge sharing by:

1. Establishing partnerships with industry groups
2. Establishing partnerships with industry companies and their building operators, owners, engineers, architects and others
3. Providing best in class research and case studies on key topics that will lead to significant reductions in energy use
4. Creating and maintaining readily accessible research and case studies
5. Discussing research and best practices with industry, industry groups, engineers and architects of high-technology buildings
6. Leading discussions about research and best practices at industry group meetings, seminars, conferences and other events
7. Providing thought leadership and enable thought-leadership from industry leaders

The main purpose of the California High-Technology Center of Excellence is to significantly reduce the energy use in California's new and existing high-technology buildings by 2015. Results and outcomes will include:

1. Industry collaboration between owners, operators, and industry groups

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2. Publicizing best practices, case studies and information to industry stakeholders
3. Providing a physical resource for knowledge, information sharing, and meetings with industry stakeholders in both Southern and Northern California. These might be located at SCE's and PG&Es respective energy centers
4. Achieving significant reductions in energy use in California's high-technology industries by 2015.

With long-term and continued funding of the California High-Technology Center of Excellence, significant long-term reductions in energy use and further competiveness of this sector and job creation will result. A one-source for all of California's high-technology industries, for continued growth and clean job creation, will create partnerships with all California utilities, stakeholders, and businesses as a unique resource to California businesses. The funding of the California High-Technology Center of Excellence should result in significant reductions in energy, air emissions, water use, and continued job growth in these important clean job engines for very low cost per kWh reduced.

As a key leader in the energy efficiency of high-technology buildings, we implore the California Energy Commission to support and fund this California High-Technology Center of Excellence.

Sincerely,

KC Mares
President & CEO
MegaWatt Consulting, Inc.