

To: Office of Planning and Research  
PO Box 3044, 1400 Tenth Street, Room 222  
Sacramento, CA 95812-3044

From: California Energy Commission  
1516 Ninth Street, MS-48  
Sacramento, CA 95814

Project Title: SeaMicro Volume Server Power Reduction Research and Development

Project Location – Specific: 5225 Betsy Ross Dr

Project Location – City: Santa Clara, CA Project Location – County: Santa Clara

**Description of Project:**

SeaMicro has developed a prototype, innovative compute appliance that is currently in beta testing with customers. The PIER funding, coupled with the ARRA grant and match funding, will be used to:

- Accelerate development engineering and quality assurance testing.
- Enhance dynamic power-management software to further drive down power draw.
- Accelerate product availability.
- Accelerate market adoption by reducing cost and modifying the system to address markets beyond volume servers, such as volume servers working on less-common workloads and mid-range and high-end servers.

The prototype appliance redesigns the volume server with more efficient CPUs and achieves over 75 percent reduction in power consumption per computation for the primary workload in the data center. The compute appliance addresses the following issues concerning the inefficiency of the CPU within volume servers:

- Different and varying workload requirements by the CPU due to the internet.
- Inefficiency in server packaging that left enormous duplication in components.

Using the U.S. EPA's estimated energy use for data centers of 61 billion kilowatt-hours/ year in 2006, the estimated energy savings in California would be 3.7 billion kilowatt-hours/ year, based on 80% of volume servers used for web-tier workloads, 68% of energy in the data center used for powering and cooling data centers, and 15% of national data center floor space located in California.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: SeaMicro Incorporated

**Exempt Status:** *(check one)*

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(a));
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- Categorical Exemption. State type and section number \_\_\_\_\_
- Statutory Exemptions. State code number. \_\_\_\_\_
- Common Sense Exemption. 15061(b)(3)

**Reasons why project is exempt:**

The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

**Lead Agency**

**Contact Person:** Paul Roggensack **Area code/Telephone/Ext:** 916-327-2224

**If filed by applicant:**

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?  Yes  No

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Signed by Lead Agency**

**Signed by Applicant**

**Date received for filing at OPR:** \_\_\_\_\_