# REVIEW OF PROVIDENCE ALASKA MEDICAL CENTER CERTIFICATE OF NEED APPLICATION FOR CONSTRUCTION AND EXPANSION OF THEIR EMERGENCY POWER SUPPLY SYSTEM

**August 13, 2010**

**Sean Parnell**
**Governor**

**William H. Hogan**
**Commissioner**

**State of Alaska/DHSS**
**Division of Health Care Services**
**Section of Health Planning and Systems Development**
**Certificate of Need Program**

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**BACKGROUND**

Providence Alaska Medical Center (PAMC) is currently licensed by the State of Alaska as an acute care hospital with 326 beds including 27 psychiatric beds and 10 rehabilitation beds.

In the last five years PAMC, through the Certificate of Need process, has completed the following projects:

2004: Magnetic Resonance Imaging System
2005: Construction of a 60 bed Long Term Acute Care Hospital as a joint venture
2006: Expansion of the Post Anesthesia Care Unit
Relocation and Expansion of the Cancer Center
2007: Expansion of the Cardiovascular Observation Unit
Relocation and Expansion of Sports Medicine/Rehabilitation Therapy
Expansion of the Neonatal Intensive Care Unit
Addition of a Cardiac Catheterization Laboratory
2009: Construction of an Ambulatory Surgical Center as a joint venture
Expansion and Relocation of a Sleep Disorder Center
Construction of an Electrophysiology Laboratory
2010: Construction and Expansion of the Neonatal Intensive Care Unit, Obstetrical Unit, and Cardiac Surgery suites

PAMC is owned and operated by Providence Health and Services as a not-for-profit Catholic healthcare organization with sister organizations and facilities in four western states. Through the Sisters of Providence this organization has had a presence in Alaska, beginning in Nome, since 1902. Currently Providence Health and Services Alaska operates four hospitals in communities in Alaska: Anchorage, Kodiak, Seward, and Valdez.

PAMC maintains an open door philosophy consistent with values of the Sisters of Providence. They provide health care to all individuals regardless of race, creed, or ability to pay.

**PROJECT DESCRIPTION**

PAMC is requesting a Certificate of Need be granted to allow for construction and expansion of the facility's emergency power supply system (EPSS). The current components in their EPSS range from 24 to 36 years old. PAMC is requesting to construct a 19,278 square foot building that will house the new EPSS. This building will be adjacent to the current EPSS plant for the facility. 2,430 square feet of the existing portion of the building that houses the current EPSS will also be involved in this construction project.

The applicant also proposes to increase their EPSS from 3.2 megawatts to 4.0 megawatts, provide for a 2.0 megawatt backup generator (in case of failure of the primary generator), and to increase their fuel storage from 30,000 gallons to 90,000 gallons.

These changes will allow PAMC to operate for 96 hours in the event of a system-wide power outage.

The new EPSS will be used for the PAMC main hospital facility and it is not intended to serve outpatient and other ancillary services on the PAMC campus.[1]

All current EPSS services will remain operational throughout construction, as required, and it is not expected to disrupt any other hospital services.

Estimated cost of this project is $36,102,750 including construction, architecture, building and engineering fees, and capital equipment. It will be financed by PAMC through accumulated revenue.

Construction is planned to be completed by March 2013.

This proposal does not add inpatient bed capacity or any new services for the facility. Because of this fact, service specific standards and methodologies were not used in the review of this application.

## REVIEW STANDARDS

### General Review Standards Applicable to All CON Applications

General Review Standard #1- Documented Need**:**

The application outlined the needs that would be met upon completion of this project. Their current EPSS contains components that range from 24 to 36 years old. Equipment needs to be replaced to assure that it conforms to current standards and practices.

The applicant addressed the National Fire Protection Association (NFPA) standards which must be met as equipment is replaced.[2]

The Joint Commission recognizes NFPA as the lead organization which establishes codes and standards on minimum design, installation, and testing of EPSS.[3]

While the applicant does acknowledge that PAMC has not received any negative reviews or inspections from these review organizations to date, it is not unreasonable to assume that future inspections, utilizing new standards, could result in documented deficiencies.

This standard is met. The applicant documented need for services.

[1] Providence Alaska Medical Center Certificate of Need Application April 2010, pg 20.
[2] Providence Alaska Medical Center Certificate of Need Application April 2010, Appendix B
[3] The Joint Commission, Sentinel Event Alert, Issue 37

**General Review Standard #2 – Relationship to Applicable Plans:**

There are local, state, and federal plans that specifically address emergency preparedness and disaster planning. PAMC is identified as a participant in local and statewide plans.[4,5]

The Joint Commission issued a Sentinel Event Alert (#37) in September 2006 which addresses preventing adverse events caused by emergency electrical power system failures.[6]

Clinical operations were negatively affected when normal power was lost during the Houston floods of 2001, the northeastern United States blackout in 2003, and major hurricanes Charlie, Francis, Ivan and Jean in 2004 and Katrina and Rita in 2005. These incidents relating to failures of emergency electrical power systems are in the Joint Commission's Sentinel Event Database (reporting period from January 1995 to the present). They range from single unit failures to entire large medical centers, and each was associated with one or more patient deaths.

Much review and standard revisions have taken place as a result of hurricanes Katrina and Rita in 2005 and the impact on hospitals and nursing homes which lost emergency power for days if not weeks. This review has resulted in the NFPA establishing codes and standards for minimum design, installation, and testing. EPSS will have to meet the standards in the National Electric Code (NFPA 70), the Standard on Health Care Facilities (NFPA 99), and the Standard for Emergency and Standby Power Systems (NFPA 110).[7]

The applicant demonstrates how the new EPSS will address the recommendations of the Joint Commission and NFPA standards and practices.

Finally, the applicant demonstrated how this project is consistent with the facility's mission and core values as well as their strategic planning for facilities and for emergency planning on a local and statewide level.[8]

This standard is met. The application addresses national codes and standards for EPSS as well as providing emergency services on a local and statewide level in the event of a disaster.

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[4] Municipality of Anchorage, Office of Emergency Management.
[5] Alaska Office of Emergency Management.
[6] The Joint Commission: http://www.jointcommission.org/SentinelEvents/SentinelEventAlert/
[7] National Fire Protection Association: http://www.nfpa.org/aboutthecodes/list_of_codes_and_standards.asp
[8] Providence Alaska Medical Center, Certificate of Need Application April 2010, pg 18-19.

**General Review Standard #3 – Stakeholder Participation:**

The applicant requests this standard be waived as they feel it is not applicable to this project, however, review of the application demonstrates stakeholder participation in exploring alternatives to replacing aging equipment and to meet new codes and standards for EPSS.

This review standard is satisfied in that staff in the Hospital Engineering Department were involved in the discussions and design of the new EPSS. Due to the complexity of the project and requirements for technical analysis design, it is understandable why no patients or service providers were involved.

**General Review Standard #4 – Alternatives Considered**:

The applicant discusses that they assessed alternative methods of providing emergency power to the facility and demonstrates that the proposed project was the most suitable approach.

The applicant explored six alternatives for the current project:[9]

1. Do nothing: It was determined that this was not an acceptable alternative as the current components are not adequate and to replace the current system with a similar system it would not address the codes and standards outlined by the Joint Commission and NFPA.

2. Separate new generators and fuel storage in their own buildings: This option was not an acceptable alternative due to increased costs and potential environmental risks of locating fuel pipelines adjacent to Chester Creek wetlands and through the hospital campus.

3. A joint venture with Municipal Light and Power and the University of Alaska to operate a combined heat and power plant: This option was not acceptable as it does not meet the NFPA time requirements for coming online following a power failure.

4. Use of modular generator buildings for the EPSS: This alternative consisted of six separate modules to house the generators, switchgear, and electrical distribution equipment. It was determined that this option was more expensive than other alternatives, required a larger footprint, and was not cost effective to run.

5. Comprehensive backup for both essential and normal electrical uses: This alternative included a generator building, two generators, space for three additional generators, chiller building core and shell, and generator voltage loop options. This option was not acceptable as it was the more expensive that the other alternative.

[9] Providence Alaska Medical Center Certificate of Need Application April 2010, pg 24-25.

6. New generator plant with adjacent fuel storage for essential uses: This alternative was selected as the best option as it was adjacent to the fuel storage, and the existing PAMC physical plant for efficient electrical connections. It will also allow PAMC to provide cost effective power service to sustain patient care for 96 hours in the event of a natural disaster or extended utility outage.

This review standard is met as alternatives were discussed and documented by the applicant.

**General Review Standard #5 – Impact on the Existing System:**

The applicant describes how the electrical system and the current emergency power system will operate during construction which is crucial as it is mandatory that there be no disruption of service during any phase of this project.

The applicant also discusses how the new EPSS will impact the local and statewide emergency preparedness plans in the event of a natural disaster or extended utility outage. PAMC, as the only tertiary care hospital in the state, is a key partner in disaster planning.

It is anticipated that the construction and expansion of the EPSS will accommodate needs and compliance with current codes and standards for emergency power supplies.

This review standard is met.

**General Review Standard #6 – Access:**

The applicant demonstrates that the project's location is adjacent and readily accessible to the hospital campus. The construction and subsequent remodeling of existing space will not and cannot displace or disrupt current services.

Access by patients and other family members as well as health care providers is not relevant to this project.

This review standard is met.

**SERVICE SPECIFIC STANDARDS AND METHODOLOGY**

This application is for construction and expansion of the EPSS. It does not increase inpatient bed capacity or add any new services to the facility. Because of this fact, service specific standards and methodologies were not used in the review of this application.

**FINANCIAL FEASIBILITY AND COST TO MEDICAID**
Review of the application by the Department's Office of Rate Review indicates the cost to Medicaid will be as follows:

1. The facility is due to be rebased using the FY 2014 Medicare cost report and some expenses related to this project may not be included until the FY 2016 rate year.

2. The project does not impact PAMC's number or type of beds, services, or surgical suites which results in no increase in patient days.

3. The annual inpatient impact will vary from $254,027 in 2013 to $333,942 in 2017 when the project's capital costs are considered in the Medicaid payment rate.

4. The annual outpatient impact will vary from $64,405 in 2016 to $63,500 in 2017 when operating costs along with capital costs are calculated in the Medicaid payment rate.

It is estimated that this project may increase Medicaid costs from $254,027 in 2013 to $397,442 in 2017.

The project will be financed through internal capital and operating funds and appears to be financially feasible.

A complete analysis from the Office of Rate Review is in Appendix A of this report.

**PUBLIC COMMENT SUMMARY**
A written public comment period was held from May 27, 2010 to June 28, 2010. A public meeting was held in Anchorage on June 17, 2010. Four PAMC employees attended and no one spoke in opposition to the project. No members of the public attended. No letters or written comments were received.

**RECOMMENDATION**
It is recommended that Providence Alaska Medical Center be granted a Certificate of Need for construction of a 19,278 square foot building and remodeling of 2,430 square feet to house an emergency power supply system. This system will increase emergency power capacity to 4.0 megawatts, provide for a 2.0 megawatt backup generator, allow for 90,000 gallons of fuel storage, install new electrical switchboards, and replace automated transfer switches.

The total cost of the project is $36,102,750. The completion date is March 31, 2013.

# APPENDIX A
# OFFICE OF RATE REVIEW

# STATE OF ALASKA

## DEPT. OF HEALTH AND SOCIAL SERVICES

***OFFICE OF RATE REVIEW***

**SEAN PARELL, GOVERNOR**

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**MEMORANDUM**

**Date:** August 5, 2010

**To:** Karen Lawfer
CON Coordinator

**From:** Jack Nielson
Executive Director

**Subject:** Certificate of Need Review for Providence Emergency Power Supply System

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Providence Alaska Medical Center proposes Emergency Power Supply System project to provide the back-up power for maintaining critical hospital operations associated with patient care during power disruptions. The Joint Commission standard states that a hospital must be able to operate for 96 hours in the event of an emergent or disastrous event when electrical power is unavailable from external sources. The project has two main components: a generator plant which includes generators and fuel to create power, and a medium voltage power distribution system in loop configuration to distribute power. This project is estimated to cost $36,102,750 financed through internal capital and operating fund. Final completion of this project will be no later than March 2013 based on provider's budget analysis.

Per 7 AAC 150.160(f)(3), granting of additional capital payment add-on amount to a per-day rate through a Certificate of Need (CON) requires that approved capital expenditures for the project be at least $5,000,000. The Emergency Power Supply System project has met this criterion. Outpatient rates are not adjusted for CON projects as the facility is reimbursed through increased charges associated with the project.

The facility is due to be rebased using the FY 2014 Medicare cost report. As such, some expenses related to this project may not be included in the facility's Medicaid rate calculation until the FY 2016 rate year. At that time the costs associated with the project will be included in the Medicaid rate calculation.

The proposed project does not impact the facility's number and type of beds, surgery suites, specialty rooms or services to be expended, added or reduced. Therefore, there will be no additional patient days. The annual inpatient impact on the program will vary from $254,027 in 2013 to $333,942 in 2017 when the project's capital costs are considered in the calculation of the Medicaid payment rate.

For outpatient, the annual impact on the program will vary from $64,405 in 2016 to $63,500 in 2017 when the project's operating costs along with the capital costs are considered in the calculation of the Medicaid payment rate. The total impact on the Medicaid program will vary from $254,027 in 2013 to $397,442 in 2017.

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Estimated Medicaid Cost/Utilization (*using information available in CON application*) if Certificate of Need is granted

| Inpatient Cost Calculation | 2013 (9 mos) | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Capital | $ 991,517 | $ 1,322,023 | $ 1,322,023 | $ 1,322,023 | $ 1,303,443 |
| Operating Expense | $ - | $ - | $ - | $ - | $ - |
| | $ 991,517 | $ 1,322,023 | $ 1,322,023 | $ 1,322,023 | $ 1,303,443 |
| CON Expense Included on Rate | $ 991,517 | $ 1,322,023 | $ 1,322,023 | $ 1,322,023 * | $ 1,303,443 * |
| Medicaid Utilization (Base Yr 2006) | 25.62% | 25.62% | 25.62% | 25.62% | 25.62% |
| Medicaid Share of Additional Expense | $ 254,027 | $ 338,702 | $ 338,702 | $ 338,702 | $ 333,942 |
| Increase in Medicaid Patient Days | - | - | - | - | - |
| Estimated Medicaid Rate | $ 2,460.13 | $ 2,533.93 | $ 2,609.95 | $ 2,688.25 | $ 2,768.90 |
| | $ - | $ - | $ - | $ - | $ - |
| **I/P Impact to Medicaid Program** | $ 254,027 | $ 338,702 | $ 338,702 | $ 338,702 | $ 333,942 |

| Outpatient Cost Calculation | 2013 (9 mos) | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Capital | | | | $ 527,977 | $ 520,557 |
| Operating Expense | | | | $ - | $ - |
| | | | | $ 527,977 | $ 520,557 |
| Medicaid Utilization (Base Yr 2006) | | | | 12.20% | 12.20% |
| Medicaid Share of Additional Expense | | | | $ 64,405 | $ 63,500 |
| **Total Impact to Medicaid Program** | **$ 254,027** | **$ 338,702** | **$ 338,702** | **$ 403,108** | **$ 397,442** |

Notes:

* 2014 is a base year for 2016 and 2017 rates. Thus, operating expense is included in the total estimated cost.

Should you have any questions please contact Joyce Seekatz at 344-2466 or me at 334-2447.