



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Indian Health Service
Rockville MD 20852

DATE: July 18, 2003
TO: For the Record
FROM: Director
Division of Facilities Planning and Construction
SUBJECT: Health Facilities Advisory Committee
4-1.3 Decision No. 42

4-1.3 Decision No. 42 – Determining the Need for Emergency/Alternative Power Sources

ISSUE:

Up-dated guidelines are needed for Indian Health Service (IHS) to assist in the determination of the need for Emergency/Alternative Power Sources at any of the Health Care or support facilities that are constructed or supported by IHS funding. This issue is essential because of the health care implications and the extreme isolation conditions that exist in Indian Country. Chapter 21-5, Electrical Design Standards, needs to be revised to allow the incorporation of Alternative Power Sources when the facility does not meet the Section 21-5.3.6 criteria but has circumstances such as isolation that would otherwise warrant inclusion of Alternative Power Sources. The revision of Chapter 21-5 will allow more flexibility for determining the need for Emergency/Alternative Power Sources within the IHS funded facilities program.

DECISION:

Chapter 21-5 will be revised to include revisions to paragraph 21-5.3.6 and new paragraphs 21-5.3.7, 21-5.3.8 and 21-5.3.9 per the attached recommendations. These revisions will be incorporated into the new chapter.

REFERENCE:

Copies of this manual can be obtained from the Division of Facilities Planning and Construction or from the IHS facilities web site.

A handwritten signature in cursive script that reads "José F. Cuzme".

José F. Cuzme, P.E.
Chairman, HFAC Committee

Generator Workgroup Recommendations for Guideline 21-5 Modifications:

Recommendation Number 1:

Make the following changes to the Paragraph 21-5.3.6:

STANDBY SYSTEM RISK CALCULATION FACTORS:

(Note: standby power system is for 100% power backup of facility)

A = TYPE OF OCCUPANCY	<u>INDEX</u>
1 – Hospital	10
2 – Ambulatory Health Center.....	8
3 – Large Health Center greater than 920 GSM.....	8
4 – Alcohol / Substance Abuse Program Facility (ASAP).....	5
5 – Health Clinic or Station 920 GSM or under.....	4
6 – Staff Residential Building.....	2
7 – Support or Other Facility.....	1
B = UTILITY VARIANCE HISTORY	
(Variation at utility service transformer, typically 600 volt or less system)	
1 - Greater than 10% voltage variation	10
2 – Between 6% to 9% voltage variation	6
3 – 0-5% voltage variation	0
C = PERSONS RESIDENT (OVERNIGHT) IN FACILITY	
16 or greater	10
10 to 15.....	7
1 to 9.....	5
D = FULL TIME ON-SITE MAINTENANCE STAFF – (trained to maintain/ operate a generator)	
Yes.....	10
No	0
E = UTILITY FEEDER TYPE	
Single Radial Line Feed.....	10
Dual Line Feed.....	5
Grid Line Feed	1
F = DESIGNATED BY EMERGENCY MANAGEMENT PLAN FOR CONTINUOUS SERVICE (see NFPA 99, CHAPTER 12)	
Yes	20
No	0
G = UTILITY POWER OUTAGE	
(15 MINUTE OUTAGES PER YEAR – record of last 3-years from the Local Utility Co.)	
None or 1	5
2 to 3.....	4
4 to 5.....	3
6 to 12.....	2
13 or Greater	1

Standby System Risk Calculation (SSRC)

$$\text{SSRC Value} = \text{Risk Factors (A+B+C+D+E+F)} / \text{Risk Factor (G)}$$

If the SSRC Value

On-Site Generator

Greater than 8	Standby Generators Justified
Between 5 to 8	Connection for Portable Generator Only
Less than 5.....	Generator NOT Justified

The SSRC value is only for a Standby Generator and not for an Emergency Generator selection. Note that criteria does not preclude a generator for peak shaving and other energy conservation reasons where the generator meets life cycle costing payback analysis of the federal energy policies using the NIST BLCC 5 calculation or latest edition thereof.

Recommendation Number 2:

Add the following:

21-5.3.7

Proposed health care facilities not meeting the Section 21-5.3.6 criteria for standby generator based on risk calculation may be authorized to include a standby generator in its Program of Requirements if supported by a medical need and recommended by the Area Chief Medical Officer and approved by the Director, OCPS.

Recommendation Number 3:

Add the following:

21.5.3.8

Existing health care facilities not meeting the Section 21-5.3.6 criteria for a standby generator based on risk calculation may be authorized to provide a standby generator utilizing eligible funding, if recommended by the operating entity and approved by the Area Facility Engineer.

Recommendation Number 4:

Add the following:

21.5.3.9

In recognition of the concerns for oversizing of standby generators, which can lead to unnecessary additional costs, severe operational problems and shortened equipment life due to “wet-stacking”, it shall be the policy of the Indian Health Service to conduct an engineering study to determine the appropriate electrical loads to be connected to the

standby power circuit. When appropriate, not all building loads will necessarily be carried on standby power. Examples of loads which could potentially be excluded include building chiller equipment (depending on climatic zone) and parking lot lights. The results of the accepted engineering study will be the basis for sizing of that standby generator.