

Recognized as an
American National Standard (ANSI)
(Reaffirmed 1990)

IEEE Std 765-1983
(Reaffirmed 1989)

IEEE Standard for Preferred Power Supply for Nuclear Power Generating Stations

Sponsor

**Nuclear Power Engineering Committee of the
IEEE Power Engineering Society**

Approved June 10, 1982
Reaffirmed November 9, 1989

IEEE Standards Board

Approved April 13, 1984
Reaffirmed April 23, 1990

American National Standards Institute

© Copyright 1983 by

The Institute of Electrical and Electronics Engineers, Inc
345 East 47th Street, New York, NY 10017

*No part of this publication may be reproduced in any form,
in an electronic retrieval system or otherwise,
without the prior written permission of the publisher.*

IEEE Standards documents are developed within the Technical Committees of the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Board. Members of the committees serve voluntarily and without compensation. They are not necessarily members of the Institute. The standards developed within IEEE represent a consensus of the broad expertise on the subject within the Institute as well as those activities outside of IEEE which have expressed an interest in participating in the development of the standard.

Use of an IEEE Standard is wholly voluntary. The existence of an IEEE Standard does not imply that there are no other ways to produce, test, measure, purchase, market, or provide other goods and services related to the scope of the IEEE Standard. Furthermore, the viewpoint expressed at the time a standard is approved and issued is subject to change brought about through developments in the state of the art and comments received from users of the standard. Every IEEE Standard is subjected to review at least once every five years for revision or reaffirmation. When a document is more than five years old, and has not been reaffirmed, it is reasonable to conclude that its contents, although still of some value, do not wholly reflect the present state of the art. Users are cautioned to check to determine that they have the latest edition of any IEEE Standard.

Comments for revision of IEEE Standards are welcome from any interested party, regardless of membership affiliation with IEEE. Suggestions for changes in documents should be in the form of a proposed change of text, together with appropriate supporting comments.

Interpretations: Occasionally questions may arise regarding the meaning of portions of standards as they relate to specific applications. When the need for interpretations is brought to the attention of IEEE, the Institute will initiate action to prepare appropriate responses. Since IEEE Standards represent a consensus of all concerned interests, it is important to ensure that any interpretation has also received the concurrence of a balance of interests. For this reason IEEE and the members of its technical committees are not able to provide an instant response to interpretation requests except in those cases where the matter has previously received formal consideration.

Comments on standards and requests for interpretations should be addressed to:

Secretary, IEEE Standards Board
345 East 47th Street
New York, NY 10017
USA

Foreword

(This Foreword is not a part of IEEE Std 765-1983, IEEE Standard for Preferred Power Supply for Nuclear Power Generating Stations).

Title 10, Code of Federal Regulations, Part 50 (10CFR50) Appendix A, General Design Criteria 17 (GDC-17) for Nuclear Power Plants requires that an offsite electric power system be provided to permit functioning of structures, systems, and components important to safety. In addition, General Design Criteria 18 (GDC-18) provides requirements for inspection and testing of electric power systems.

It is the intent of this standard to provide detailed design criteria for the Preferred Power Supply (PPS) to ensure a design commensurate with its intended function and provide sufficient detail to interpret, clarify, and expand guidance given in GDC-17, GDC-18 and ANSI/IEEE Std 308-1980, IEEE Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations. ANSI/IEEE Std 308-1980 provides general requirements for the preferred power supply but excludes it from the scope of the standard.

The working group has identified the following areas for future work:

- (1) Additional independence criteria for PPS power and control circuits
- (2) Criteria for control of PPS for multiunit stations

This standard was prepared by Working Group 4.6 of Subcommittee 4. The working group had the following membership at the time this standard was approved.

Peter Szabados, *Chairman*

Farouk D. Baxter
Evangelos C. Marinos
William J. Mindick

Sam P. Martinovich
William P. Nowicki
Patrick Scannell

Acknowledgement is extended to the following former members of the working group:

Alfred T. Baker

Harvey Skow

The standard was balloted by the Nuclear Power Engineering Committee, whose members at the time of its approval were:

R.E. Allen, *Chairman*

J.B. Bauer, *Vice Chairman*

B.M. Rice, *Vice Chairman*

C.M. Chiappetta, *Secretary*

Jack F. Bates
Tom M. Bates, Jr
Farouk D. Baxter
Robert G. Benham
John T. Boettger
Dan F. Brosnan
David G. Cain
Fred W. Chandler
Ernesto A. Corte
Roland P. Daigle
Ed F. Dowling
John J. Ferencsik
Eugene P. Fogarty
John M. Gallagher

John B. Gardner
Lew Hanes
Robert I. Hayford
Ivan M. Jacobs
Robert F. Karlicek
Al Laird
Gary R. Leidich
Len C. Madison
Steve H. Moss
William E. O'Neal
Randy W. Pack
Mohan Pai
Elmer S. Patterson
Joe R. Penland

Cono A. Petrizzo
Newell S. Porter
William S. Rautio
Howard V. Redgate
Arnold R. Roby
William F. Sailer
Anthony J. Spurgin
Loren Stanley
Hal K. Stolt
Don F. Sullivan
Peter Szabados
Lou D. Test
James E. Thomas
Fred J. Volpe

When the IEEE Standards Board approved this standard on June 10, 1982, it had the following membership:

I. N. Howell, Jr, *Chairman*

Irving Kolodny, *Vice Chairman*

Sava I. Sherr, *Secretary*

C. Y. R. Allen
J. J. Archambault
James H. Beall
John T. Boettger
J. V. Bonucchi
Edward Chelotti
Edward J. Cohen

Len S. Corey
J. V. Fleckenstein
Jay Forster
Kurt Greene
Joseph L. Koepfinger
John E. May

Donald T. Michael*
A. R. Parsons
J. P. Riganati
Robert W. Seelbach
Jay A. Stewart
Clifford O. Swanson
Robert E. Weiler

*Member emeritus