**P1891**

**Submitter Email:** michael.miller3@duke-energy.com  
**Type of Project:** New IEEE Standard  
**PAR Request Date:** 14-Feb-2013  
**PAR Approval Date:** 10-May-2013  
**PAR Expiration Date:** 31-Dec-2017  
**Status:** PAR for a New IEEE Standard

1.1 **Project Number:** P1891  
1.2 **Type of Document:** Standard  
1.3 **Life Cycle:** Full Use

2.1 **Title:** Standard Criteria for Application of Intelligent Digital Devices to Nuclear Power Generating Stations

3.1 **Working Group:** Intelligent Digital Devices (PE/NPE/WG_6.6)  
**Contact Information for Working Group Chair**  
- **Name:** Michael Miller  
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- **Phone:** 864 638-6316

**Contact Information for Working Group Vice-Chair**  
None

3.2 **Sponsoring Society and Committee:** IEEE Power and Energy Society/Nuclear Power Engineering (PE/NPE)  
**Contact Information for Sponsor Chair**  
- **Name:** George Ballassi  
- **Email Address:** gballassi@gdeb.com  
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**Contact Information for Standards Representative**  
- **Name:** Paul Yanosy  
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4.1 **Type of Ballot:** Individual  
4.2 **Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 07/2015  
4.3 **Projected Completion Date for Submittal to RevCom:** 08/2017

5.1 Approximate number of people expected to be actively involved in the development of this project: 12

5.2 **Scope:** This standard addresses the use of digital technology in intelligent digital devices/components in nuclear power generating stations. The criteria contained herein and those standards referenced within establish the minimum component level design and process requirements for intelligent digital devices/components used in nuclear power plant applications, using a graded approach.

5.3 **Is the completion of this standard dependent upon the completion of another standard:** No

5.4 **Purpose:** This standard provides criteria and guidance for the use of intelligent digital devices/components in nuclear generating station applications. This standard addresses the use of current devices/components that contain embedded microprocessors and microcontrollers for performance of the device/component function, self-monitoring, communicatons, diagnostics, trending, etc. This standard provides criteria and guidance for the device/component's ability to perform its intended plant function. This standard provides guidance for these digital devices/components to aid in determining surveillance frequencies and calibration intervals. This standard provides experience-based guidance for suppliers of digital devices/components to meet commercial grade item dedication (CGID).

5.5 **Need for the Project:** The project addresses new technology that is not adequately addressed in IEEE or IEC standards.

5.6 **Stakeholders for the Standard:** Stakeholders for this standard are utilities, regulators, and vendors that provide digital technology based devices/components for use in nuclear power generating stations.

**Intellectual Property**  
6.1.a. **Is the Sponsor aware of any copyright permissions needed for this project?** No  
6.1.b. **Is the Sponsor aware of possible registration activity related to this project?** No

7.1 **Are there other standards or projects with a similar scope?** Yes  
If **Yes please explain:** IEC is in draft process with similar scope standard but does not at this time adequately address
aspects considered to be applicable to the use of intelligent digital devices in nuclear generation plants. IEC-62671, Nuclear Power Plants - Instrumentation and control important to safety - Selection and use of industrial digital devices of limited functionality.

IEEE activity P1686 Standard for Intelligent Electronic Devices Cyber Security Capabilities is of overlapping interest. Discusses similar topic area, but limited to Supervisory Control and Data Applications (SCADA) type application and non-nuclear applications.

IEEE 1451, A standard in support of smart transducer networking is another standard of similar subject material, but does not address nuclear application.

and answer the following

Sponsor Organization: IEC
Project/Standard Number: 62671
Project/Standard Date: 26-Jul-2012
Project/Standard Title: Nuclear Power Plants - Instrumentation and control important to safety - Selection and use of industrial digital devices of limited functionality

7.2 Joint Development
Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation):