

**IEEE P2800—STANDARD FOR INTERCONNECTION AND
INTEROPERABILITY OF INVERTER-BASED RESOURCES
INTERCONNECTING WITH ASSOCIATED TRANSMISSION
ELECTRIC POWER SYSTEMS**

IEEE SA BALLOT – SA BALLOT GROUP

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SENIOR PROGRAM MANAGER

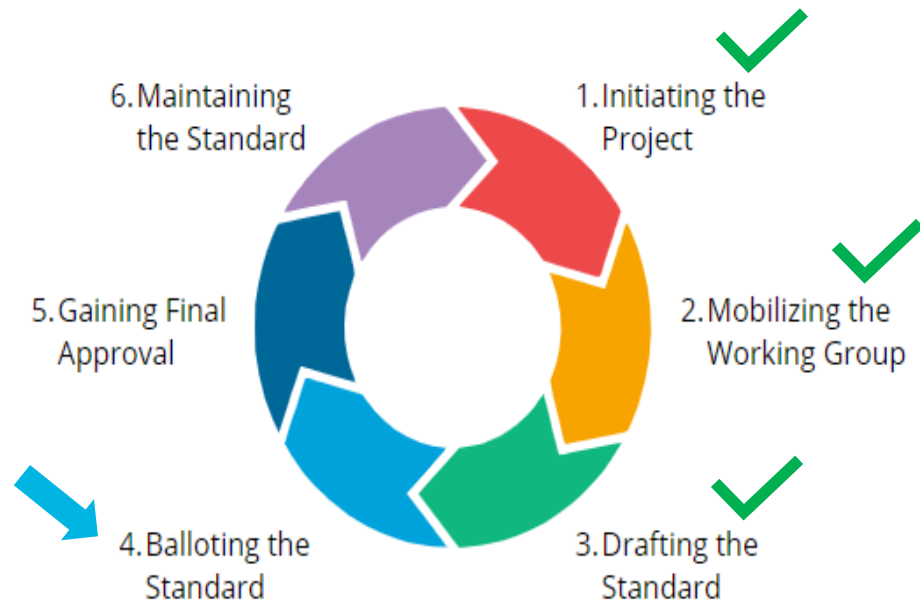
IEEE STANDARDS ASSOCIATION

February 2021



IEEE-SA SPONSOR BALLOT & PUBLIC REVIEW

- IEEE SA Ballot Group invitation was **sent to >2,500 subject matter experts** within IEEE societies and their committees
- Goal is to form a balanced ballot group **by March 3, 2021**, with no one stakeholder group having dominance
 - Follow instructions available on the P2800 website at <https://sagroups.ieee.org/2800/members/>
 - General information on the (public) IEEE-SA ballot is available at <https://standards.ieee.org/faqs/balloting.html>



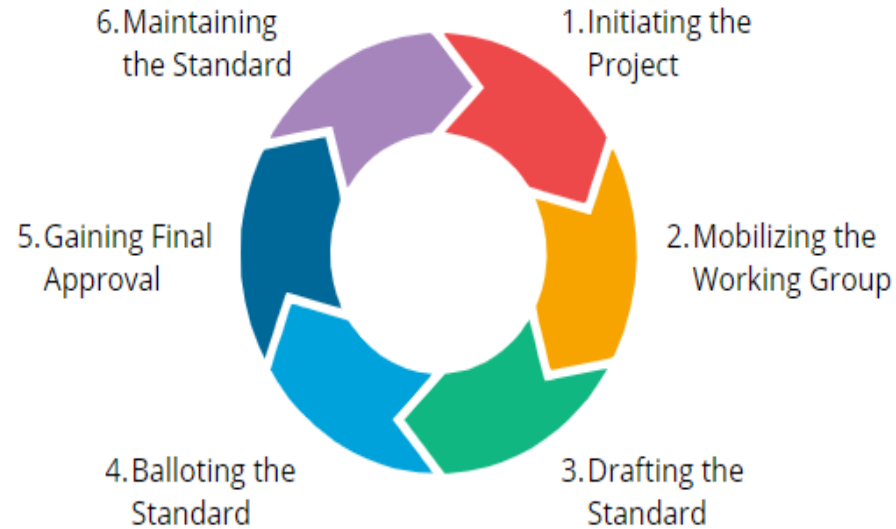
Consensus =

- $\geq 75\%$ Quorum
- $\geq 75\%$ Approval
- *WG Chair's goal is $\geq 90\%$!*

Milestone: SA Initial Ballot + Public Review	March 4, 2021* (30 days for SA ballot, WG/CRG resolves comments, 60 days for public review)
Recirculation 1	June 2021* (10 days + comment resolution)
Recirculation 2	July 2021* (10 days + comment resolution)
Recirculation n-th	Aug 2021* (10 days + comment resolution)
Milestone: Submission to RevCom	Aug 13 / Sep 10 / Oct 18, 2021*
Milestone: Publication	December 2021*

* tentative dates

STANDARDS DEVELOPMENT LIFECYCLE



This presentation provides an overview of Stage 4 of the standards development lifecycle –Balloting the Standard

AGENDA

1. Invitation Process step by Step
2. Balloting Flow Chart
3. Public Review
4. SA Ballot - Response & approval rate

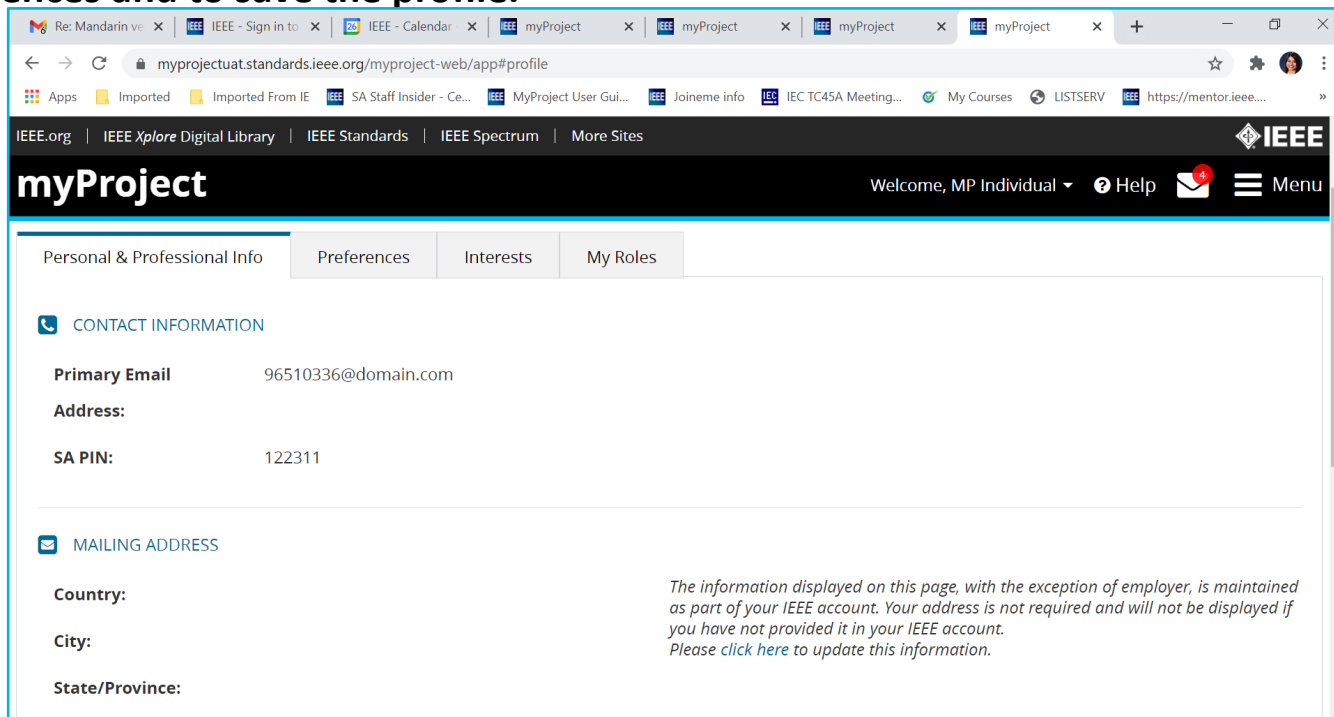
MYPROJECT SIGN IN

- [MyProject](#)
- [IEEE SA Membership](#)

The screenshot shows a web browser window with multiple tabs. The active tab is titled 'myProject' and the address bar shows the URL 'myprojectuat.standards.ieee.org/myproject-web/public/view.html#landing'. The page header includes navigation links: 'IEEE.org', 'IEEE Xplore Digital Library', 'IEEE Standards', 'IEEE Spectrum', and 'More Sites'. The main heading is 'myProject'. Below it, a message states: 'Please be aware, you may have trouble with file downloads due to a recent Chrome update. Please see our **Known Issues** page for more details.' The main content area describes the system: 'The IEEE Standards Association myProject system is an application used for IEEE standards process items, such as Standards Association balloting (SA Ballot), PAR submission, and related aspects of the IEEE standards process.' There are two buttons: 'SIGN IN' (orange) and 'CREATE ACCOUNT' (blue). Below the buttons, it says: 'In addition, IEEE SA offers a variety of tools to assist in the standards development process. For assistance with requesting access to any of these tools please contact your IEEE SA program Manager. [View eTools >](#)'. At the bottom, there is a 'myProject Help Video' section and a cookie consent banner that reads: 'IEEE websites place cookies on your device to give you the best user experience. By using our websites, you agree to the placement of these cookies. To learn more, read our [Privacy Policy](#).' with an 'Accept & Close' button.

MANAGE PROFILE AND INTEREST

If this is the first time you have signed in, you will be asked to add personal and professional info and preferences and to save the profile.



The screenshot shows a web browser window with multiple tabs. The active tab is 'myProject' at the URL 'myprojectuat.standards.ieee.org/myproject-web/app#profile'. The page header includes the IEEE logo and navigation links like 'IEEE.org', 'IEEE Xplore Digital Library', 'IEEE Standards', and 'IEEE Spectrum'. The main heading is 'myProject' with a welcome message 'Welcome, MP Individual'. Below this is a tabbed interface with four tabs: 'Personal & Professional Info' (selected), 'Preferences', 'Interests', and 'My Roles'. The 'Personal & Professional Info' tab contains two sections: 'CONTACT INFORMATION' and 'MAILING ADDRESS'. The 'CONTACT INFORMATION' section has fields for 'Primary Email' (96510336@domain.com), 'Address:', and 'SA PIN:' (122311). The 'MAILING ADDRESS' section has fields for 'Country:', 'City:', and 'State/Province:'. A disclaimer note on the right states: 'The information displayed on this page, with the exception of employer, is maintained as part of your IEEE account. Your address is not required and will not be displayed if you have not provided it in your IEEE account. Please [click here](#) to update this information.'

MENU – CLICK ON INVITATIONS/BALLOTS

Click on the Menu bottom on the right, select Invitation/Ballots

The screenshot displays the IEEE Standards Association user interface. At the top, a navigation bar includes links for 'Library', 'IEEE Standards', 'IEEE Spectrum', and 'More Sites'. Below this, a dark header bar shows 'Welcome, MP Individual' with a dropdown arrow, a 'Help' icon, a notification icon with a red badge, and a 'Menu' button. The main content area features three tabs: 'Preferences', 'Interests', and 'My Roles'. Below the tabs, there is a form with fields for 'Email' (containing '96510336@domain.com') and 'Phone' (containing '122311'). A disclaimer at the bottom of the form states: 'The information displayed on this page, with the exception of employer, is maintained as part of your IEEE account. Your address is not required and will not be displayed if you have not provided it in your IEEE account. Please [click here](#) to update this information.' On the right side, a vertical menu is open, listing various options: 'Home', 'Manage Profile & Interests', 'Manage Groups', 'View/Manage PARs', 'Invitations/Ballots' (highlighted with a red arrow), 'AudCom/NesCom/RevCom', 'View/Manage Standards Committee P&Ps', 'PARs and Standards Report', and 'Test Tools'. The IEEE logo is visible at the bottom of this menu.

Library | IEEE Standards | IEEE Spectrum | More Sites

Welcome, MP Individual ▾ ? Help [Notification Icon] Menu

Preferences Interests My Roles

96510336@domain.com

122311

The information displayed on this page, with the exception of employer, is maintained as part of your IEEE account. Your address is not required and will not be displayed if you have not provided it in your IEEE account. Please [click here](#) to update this information.

<https://myprojectuat.standards.ieee.org/myproject-web/app#ballots>

- Home
- Manage Profile & Interests
- Manage Groups
- View/Manage PARs
- Invitations/Ballots
- AudCom/NesCom/RevCom
- View/Manage Standards Committee P&Ps
- PARs and Standards Report
- Test Tools

IEEE



INVITATIONS/BALLOT – ALL INVITATIONS

Click on the Open Invitations TAB, then click on the button that shows All Invitations to see all open invitations.

If you have added interest for this project, it will show up in the my Invitations listing

IEEE.org | IEEE Xplore Digital Library | IEEE Standards | IEEE Spectrum | More Sites

myProject

Welcome, MP Individual ▾ ? Help  4  Menu


☒ Invitations/Ballots System Date/Time: 26-JAN-2021 09:55 UTC-12


Warning: Use of the browser back button may result in unsaved data or unexpected behavior. Use system navigation buttons or menus.

Open Invitations My Ballots (Voter)

The "My Invitations" view displays open invitations which are based on your interest designation or those to which you have been invited. The "All Invitations" view shows all current open invitations.

Show: ☐ My Invitations ☒ All Invitations

Showing 1-2 of 2 

PAR/Standard Number ⓘ	Project Title	Committee	Ballot Type	Invitation Close Date	Ballot Invitations
P2800	Standard for Interconnection and Interoperability of Inverter-Based Resources (IBR) Interconnecting with Associated Transmission Electric Power Systems [-]	PE/EDPG/WSPPID/WSPI/WSPI-P ⓘ	Individual	03 Mar 2021	

JOIN THE BALLOT GROUP

Click on Join the Ballot button on the right

The screenshot shows the IEEE myProject website interface. At the top, there is a navigation bar with links to IEEE.org, IEEE Xplore Digital Library, IEEE Standards, IEEE Spectrum, and More Sites. The main header area includes the 'myProject' logo, a welcome message 'Welcome, MP Individual', a help icon, a notification icon with a red '4', and a menu icon. Below the header, there are tabs for 'Open Invitations' and 'My Ballots (Vote)'. The 'My Ballots (Vote)' tab is active, showing a list of ballot invitations. One invitation is visible: 'View Ballot Invitation for P1012'. To the right of this invitation are two buttons: 'Back' and 'Join The Ballot'. A blue arrow points to the 'Join The Ballot' button. Below the invitation list, there is a section for 'Ballot Invitation for P2800' with a 'View PAR' button. The invitation text reads: '***** Standards Association (SA) Ballot Invitation***** We are contacting you because you indicated an interest in participating in this technical area, or you indicated an interest in the activities of this Working Group, project, or its Standards Committee in myProject. IMPORTANT! To participate, you must have access to myProject through an IEEE Account If you would like to participate in the balloting of the document listed below, you must enroll as a member of the ballot group by 03 Mar 2021, 23:59 UTC-12. ***** IEEE STANDARD DOCUMENT INFORMATION ***** The IEEE Power and Energy Society Society/Energy Development & Power Generation invites you to participate in the Individual Standards Association Ballot for: P2800 Title: Standard for Interconnection and Interoperability of Inverter-Based Resources (IBR) Interconnecting with Associated Transmission Electric Power Systems Scope: This standard establishes the required interconnection capability and performance criteria for inverter-based resources interconnected with transmission and sub-transmission systems. Included in this standard are performance requirements for reliable integration of inverter-based resources into the bulk power system, including, but not limited to, voltage and frequency ride-through, active power control, reactive power control, dynamic active power support under abnormal frequency conditions, dynamic voltage support under abnormal voltage conditions, power quality, negative sequence current injection, and system protection. The standard shall also be applied to isolated inverter-based resources that are interconnected to an AC transmission system via a dedicated voltage source converter high-voltage direct current (HVDC-VSC) transmission facilities; in these cases, the standard shall apply to the combination of the isolated IBR and the HVDC-VSC facility and shall not apply to

ADD YOUR AFFILIATION

Add your affiliation, you can type it in or select it, next click on the select Classification button

Join Individual Ballot for P2800

Affiliation > Classification

Please update your affiliation(s) per [IEEE SA Standards Board Bylaws 5.2.1.5](#). You must declare at least one affiliation before saving.
You can add affiliations that do not already appear in the affiliation list by typing the full name, and then clicking on the Add button.

My Affiliation(s):

Electric Power Research Institute, Inc. (EPRI) ✖

US Department of Energy ✖

Enter 2 or more characters to display and select from the affiliation list

Add

Select Affiliation(s)

Cancel

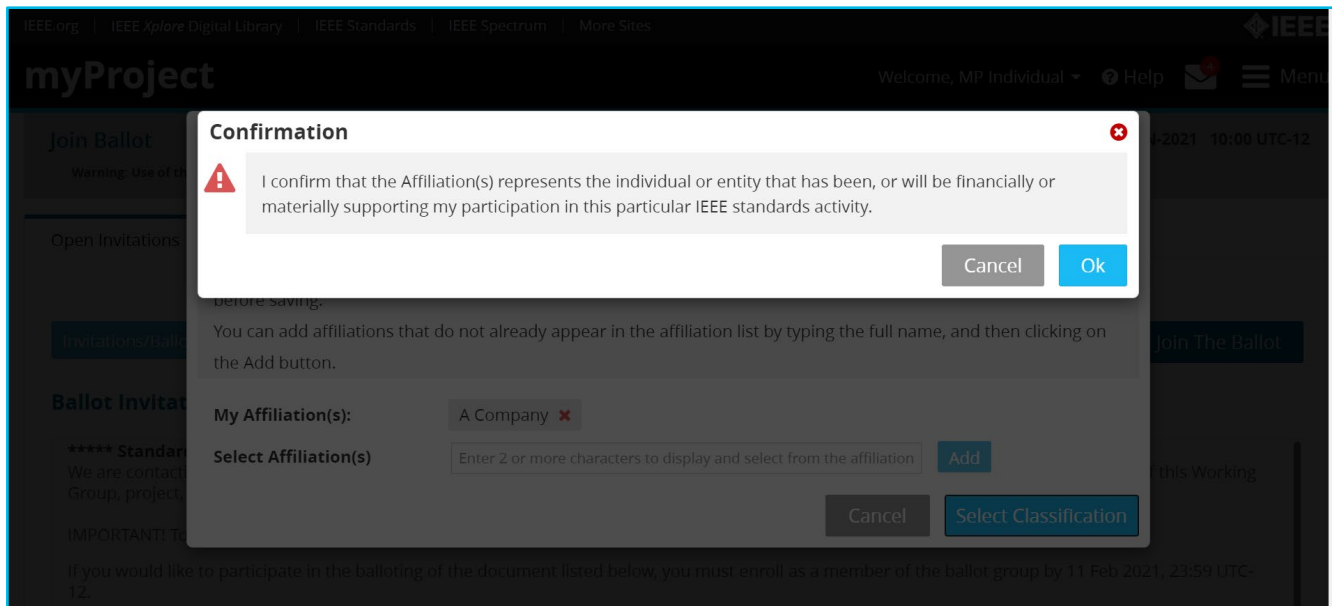
Select Classification

IEEE SA STANDARDS ASSOCIATION

IEEE 10

AFFILIATION CONFIRMATION SCREEN

Confirm your affiliation by clicking ok



SELECT CLASSIFICATION

Select a voter classification that best suits your interest in this ballot.

Join Individual Ballot for P2800

Affiliation > Classification

Select the voter classification from the list below that best represents your voting interest. You may change your selection at any time during ballot group formation.

Specify Voter Classification

Academic-Other	An educational institution or a person or entity affiliated with such institution, that does not fall under any of the other Academic categories, providing academic review of the standard being developed.	<input type="radio"/>
Academic-Researcher	An educational institution, or a person affiliated with such institution, engaged in research in the subject matter covered by the standard being developed.	<input type="radio"/>
Academic-Student	A student of an educational institution with direct interest in the standard being developed.	<input type="radio"/>
Academic-Teacher	A teacher/professor/instructor at an educational institution with direct interest in the standard being developed.	<input type="radio"/>
Consulting	A person or entity that provides consulting services in the field covered by the standard being developed.	<input type="radio"/>
Distributor/ Retailer/Reseller	Distributors, resellers, or retailers of conformant products, or a person affiliated with such entity.	<input type="radio"/>
General Interest	A participant in standards activities that may benefit directly or indirectly, and may be affected by the standard being developed without being primarily a member of any of the other interest categories defined for this ballot.	<input type="radio"/>
Government - Defense/Military	A defense or military governmental entity, or a person affiliated with such entity, with direct interest in the standard being developed.	<input type="radio"/>
Government - Other	A governmental entity that does not fall under any other Government categories, or a person affiliated with such entity with direct interest in the standard being developed.	<input type="radio"/>
Government - Other	A governmental entity that does not fall under any other Government categories, or a person affiliated with such entity with direct interest in the standard being developed.	<input type="radio"/>

Cancel Return to Affiliations

SUBMIT YOUR SELECTION FOR VOTER CLASSIFICATION

Scroll down the page the list and click on the submit button

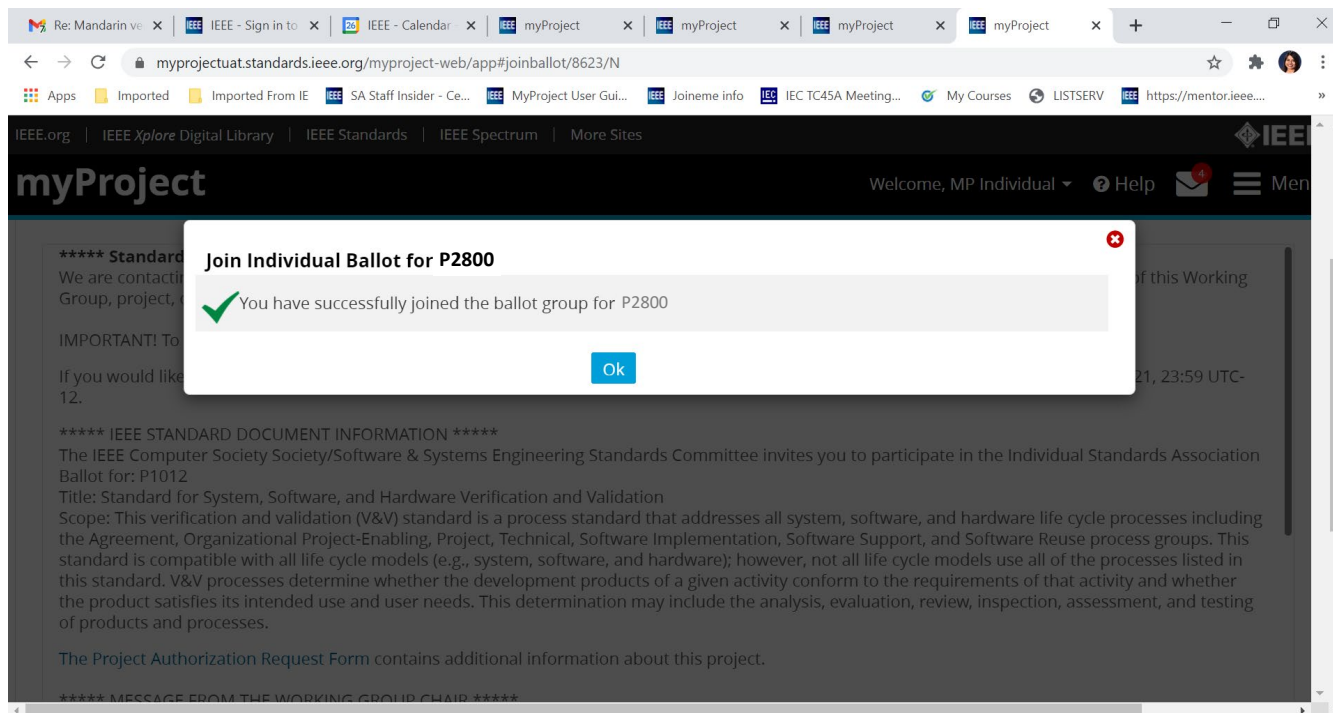
The screenshot shows a web browser window with the IEEE myProject interface. The browser's address bar displays 'https://mentor.ieee...'. The page content includes a sidebar with 'myProject' and a main area with a table for selecting a voter classification. The table has three columns: a selection radio button, a service provider name, and a description. Five options are listed, each with an unselected radio button. At the bottom of the table are three buttons: 'Cancel', 'Return to Affiliations', and 'Submit'. The background shows parts of an email or notification from the IEEE Standards Association.

<input type="radio"/>	Service Provider - Design Services	A person or entity that provides, or may provide, design services for the subject matter covered by the standard being developed.
<input type="radio"/>	Service Provider - Documentation Services	A person or entity that provides, or may provide, documentation services with direct interest in the standard being developed.
<input type="radio"/>	Service Provider - Recycling and Reuse Services	A person or entity that provides, or may provide, services to recycle and/or reuse products.
<input type="radio"/>	Service Provider - Testing	A person or entity that provides, or may provide, testing services to test the conformance and/or interoperability of products.
<input type="radio"/>	Service Provider -	A person or entity that provides, or may provide, training

Cancel Return to Affiliations Submit

CONFIRMATION OF JOINING SA BALLOT

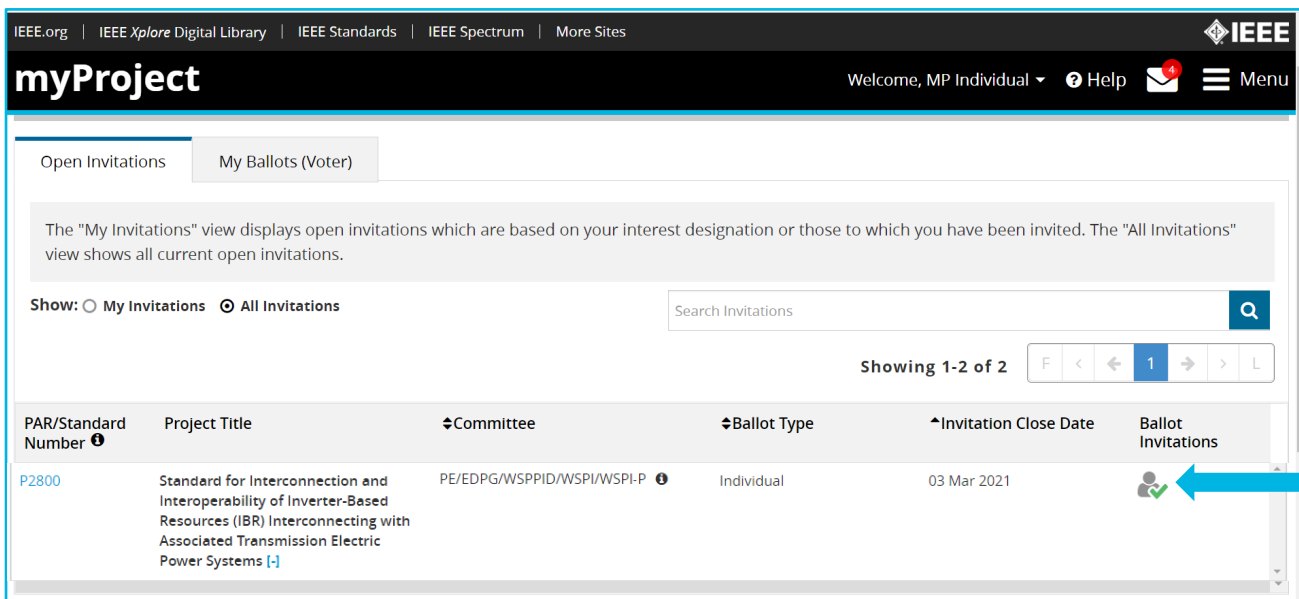
A confirmation screen pops up to confirm showing you have joined the Ballot group




CONFIRMATION ON JOINING BALLOT GROUP

The Check indicates you have joined the ballot group successfully.

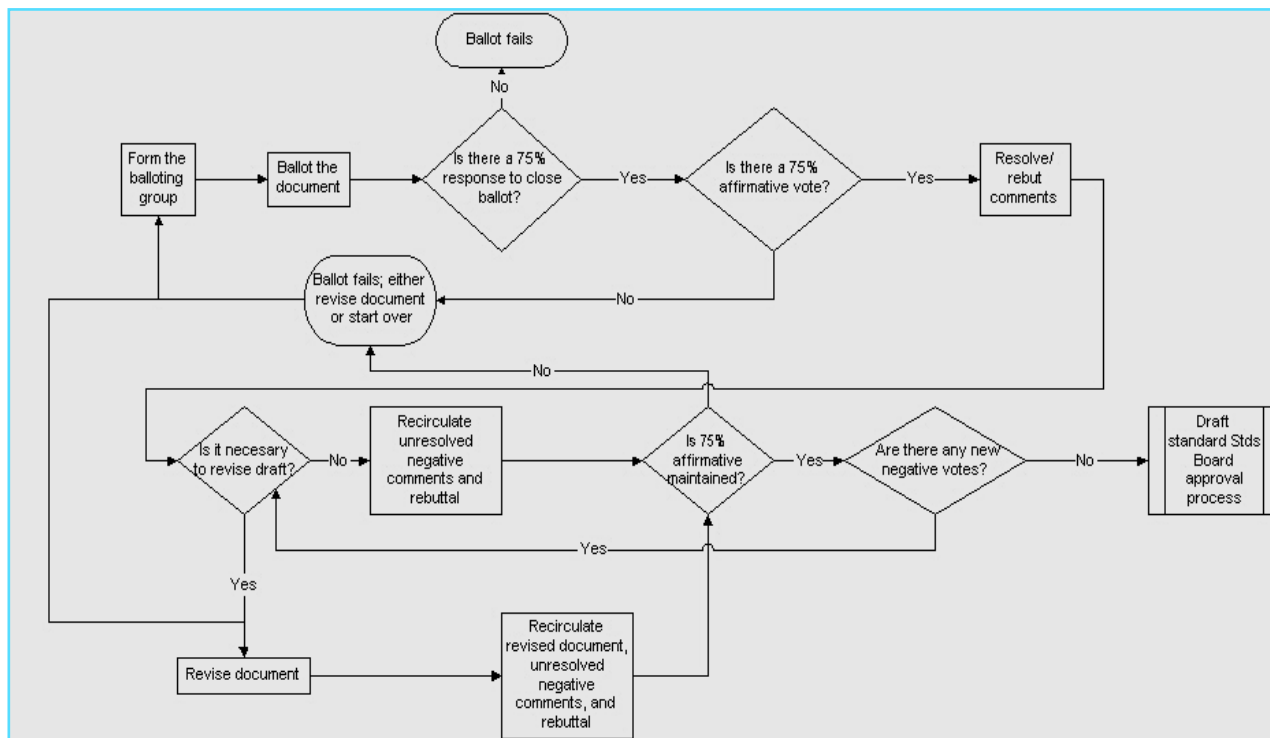
When the Ballot is initiated and once the invitation period closes, you will be informed to ballot on the document. Invitation is open for 30 days.



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PAR/Standard Number	Project Title	Committee	Ballot Type	Invitation Close Date	Ballot Invitations
P2800	Standard for Interconnection and Interoperability of Inverter-Based Resources (IBR) Interconnecting with Associated Transmission Electric Power Systems [-]	PE/EDPG/WSPPID/WSPI/WSPI-P	Individual	03 Mar 2021	

BALLOTING FLOW CHART



Please see section 6.10 of the [myProject user guide](#) for steps on how to Ballot

PUBLIC REVIEW PROCESS OVERVIEW

A 60 day Public Review period begins automatically with the opening of the SA Ballot

The IEEE SA Public Review process provides an opportunity for any interested party to submit comments on any eligible initial ballot draft, and obtain responses from the IEEE Working Group.

All comments received from the Public Review period shall be considered and responded to. Public Review comments do not have votes associated with them.

- Consensus is not based on Public Review comments
- Working Group/Comment Resolution Group will identify in their response if they have determined that they will make a change in the draft
- If responses identify a change to the draft, the Public Review commenter can request a revised draft
- Each public review commenter receives only their responses
- As normally required, changes to the draft must be recirculated in a SA Ballot recirculation
- All Public Review comments and responses shall be submitted to RevCom

IEEE SA BALLOT CONSENSUS: RESPONSE & APPROVAL RATE

IEEE SA Ballot Consensus is achieved when:

- At least *75% of the ballot group* voted (Response rate)
- The number of *Approve votes* is *75% or more of the total Approve and Do Not Approve (with Comments) votes*. (Approval Rate)
- Fewer than *30% of the ballot group* voted Abstain

Response Rate:

- If the response rate is not met:
 - The ballot can be extended by the Program Manager (PM)
 - WG Officers and PM can work together to reach out to those that have not responded
- The response rate must be met in order to continue with the balloting process.

Approval Rate:

- If the approval rate is not met, the entire draft is open for comments on the next ballot (recirculation).
- During a recirculation ballot, SA balloting group members shall have an opportunity to cast votes or change their previously cast votes.

SA BALLOT NEXT STEPS - RECIRCULATION OVERVIEW

When is a recirculation ballot required?

- All unresolved Do Not Approve votes with comments shall be recirculated to the Standards Association balloting group.
- All substantive changes made since the last ballot of the proposed standard shall be identified and recirculated to the Standards Association balloting group. If there are significant changes made to the draft you may consider opening:
 - The entire draft for comments on the next ballot recirculation
 - The recirculation for a longer period of time

Recirculation ballot(s):

- Minimum of 10 days
- During a recirculation ballot, SA balloting group members shall have an opportunity to cast votes or change their previously cast votes
- Once the proposed standard has achieved 75% approval, comments in recirculation ballot(s) shall be based on:
 - Only on the changed portions of the draft
 - Portions affected by the changes
 - Portions subject to unresolved comments associated with Do Not Approve votes.

SA BALLOT – COMMENT RESOLUTION GUIDELINES

- The Comment Resolution Group will review and consider all comments that are received by the close of the ballot. This includes comments received outside of the myProject system and mandatory coordination comments.
- Evidence of Consideration
 - Comments that advocate changes in the proposed standard, whether technical or editorial, may be accepted, revised, or rejected.
- Until the proposed standard has achieved 75% approval, comments can be based on any portion of the proposed standard
- Comments not based on the proposed standard may be rejected and deemed out-of-scope of the standards balloting process by the Standards Committee.

Comments received by the WG after the close of the ballot

- Shall be acknowledged and may be considered
- The Standards Committee shall acknowledge the receipt of these late comments
- Take action as the Standards Committee deems appropriate.

❖ For more information, see the IEEE SASB Operations Manual Clause 5.4.3.3 - Comments in the ballot

ADDITIONAL RESOURCES

The SA Balloting Process

<https://standards.ieee.org/develop/balloting-standard/balloting.html>

RevCom Ballot and Comment Resolution Process Guidelines

<https://standards.ieee.org/content/dam/ieee-standards/standards/web/governance/revcom/guidelines.pdf>

RevCom Comment Resolution Preparation Guidelines

https://standards.ieee.org/content/dam/ieee-standards/standards/web/governance/revcom/Comment_Resolution_Preparation_Guidelines.pdf

[IEEE SA Standards Working Group Chair Fundamentals Course](#), Module 10 “Balloting Your Standard”

QUESTIONS?

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