

RETRAN/VIPRE User Group Charter

Revision 2

May 2018

RETRAN/VIPRE USERS GROUP CHARTER

1. Preamble

Zachry Nuclear Engineering, Inc. (Zachry), under license from EPRI, has formed a software users group to be known as the RETRAN/VIPRE Users Group (RVUG). The RVUG is a self-supported organization formed to maintain and enhance the following software packages owned by EPRI:

- RETRAN-02,
- RETRAN-3D,
- VIPRE-01, and
- ancillary packages, including pre- and post-processors.

It is operated by Zachry, the Engineering Contractor, under the direction of the RVUG membership as described herein. Two separate subgroups, the RETRAN User Group (RUG) and the VIPRE User Group (VUG), shall be established for the RETRAN and VIPRE computer programs, respectively.

Use of the term “RETRAN” shall be limited to versions of the RETRAN software and any related ancillary packages specifically identified in the RVUG work scope. Similarly, use of the term “VIPRE” shall be limited to versions of the VIPRE software and any related ancillary packages specifically identified in the RVUG work scope.

The overall objective of the RVUG is to support and encourage the maintenance, development and application of the RETRAN and VIPRE computer programs in the interests of the nuclear electric industry.

2. Purpose

The purpose of the RVUG shall be to:

- Develop and provide appropriate maintenance of the RETRAN and VIPRE codes as well as consultation services to RETRAN and VIPRE code users as follows.
 - Code maintenance shall include software configuration control supported by documentation and control of released versions of the code.
 - User support shall include limited consultation services (see Section 6.2) in the use and operation of RETRAN and VIPRE, as well as for error reporting and corrections.

- Identify, implement, and validate modifications or enhancements to the RETRAN and VIPRE software packages to extend the range of applicability of the models or to improve the usability of the codes.
- Work to support and promote industry and regulatory acceptance of the RETRAN and VIPRE software packages and applications.
- Enhance technology transfer to the RVUG by:
 - promoting presentations by RVUG members highlighting current RETRAN and VIPRE experience,
 - providing a forum for discussion of existing and/or proposed RETRAN and VIPRE modifications,
 - encouraging ongoing RETRAN and VIPRE user training,
 - providing access to up-to-date information on RETRAN and VIPRE development and application activities,
 - creating and maintaining appropriate procedures and documentation for support of RVUG functions, and
 - supporting RETRAN and VIPRE modifications and enhancements based on technical advancements and RVUG needs.

3. Limitations

Any version of RETRAN or VIPRE incorporating custom modifications made outside of the established configuration control procedures described in Section 6.3 will not be recognized as a code version supported by the RVUG. However, if an error is reported for an unsupported code version, an evaluation will be made to determine if the error is present in the supported code version. If it is determined that the error is present in the supported code version, appropriate corrective action will be taken. If the error is related to the custom modifications, the owner shall be responsible for any corrective action required.

All members of the RVUG shall have current licenses from EPRI or Zachry to use specific versions of the RETRAN or VIPRE software packages as applicable. The RVUG Charter cannot supersede any rights or restrictions specified in those licenses.

Any ancillary packages developed with RVUG funds may be distributed at the discretion of the Steering Committee.

4. Organization

4.1 Membership Requirements

Membership in the RVUG is open to organizations that have executed a licensing agreement with either the Engineering Contractor or EPRI and have paid the annual membership fee. Membership shall continue as long as the participating organization pays its annual membership dues. Three classes of membership are provided for participating organizations based on their use of the code. These classes are used to determine membership fees (Section 6.6) and voting shares (Section 6.5). They are:

- Utility Organization - A domestic or foreign utility organization is defined as for-profit entity, licensed by EPRI or the Engineering Contractor to use one or more of the code packages that fall within the scope of the RVUG to support nuclear plant design, licensing, training, or related activities for nuclear plants owned or operated by the utility organization.
- Commercial Organization - A commercial organization is defined as a non-utility, non-government, for-profit entity, licensed by EPRI or the Engineering Contractor to use one or more of the code packages that fall within the scope of the RVUG to support nuclear plant design, licensing, training, or related activities.
- Research Organization – A research organization is defined as a non-utility, non-commercial, not for-profit organization, e.g., a national laboratory or government regulatory agency, licensed by EPRI or the Engineering Contractor to use one or more of the code packages that fall within the scope of the RVUG but does not support nuclear plant design, licensing, training, or related activities for a utility or commercial organization.

4.2 Structure

The structure of the RVUG shall include:

- a RVUG Chairperson elected biennially from the RVUG membership,
- a Steering Committee of up to five members to be nominated by the Chairperson from the RVUG membership and approved by the RVUG membership. The RVUG Chairperson is a member and Chairperson of the Steering Committee. To the extent practical, the Steering Committee should represent the diversity of the RVUG membership (e.g., PWR utility, BWR utility, commercial user, research facility, international user, etc.)), and
- an EPRI project manager.

The duties of the **RVUG Chairperson** are to:

- conduct meetings of the RVUG in accordance with the guidance of this Charter,
- conduct meetings of the RVUG Steering Committee as necessary to manage the business of the RVUG,
- promote the exchange of information between the RVUG members and Engineering Contractor,
- mediate disagreements between members and the Engineering Contractor regarding the deliverables and services provided by the Engineering Contractor,
- ensure that the voting process complies with the requirements set forth in the Charter, including votes taken outside the regular RVUG meetings (e.g., electronically), and
- approve the use of subcontractors by the Engineering Contractor on activities performed for the RVUG.

The following duties are delegated to the **Engineering Contractor**, with appropriate oversight by the RVUG Chairperson:

- perform maintenance and configuration control in accordance with the annual work scope according to the provisions of Section 6.2,
- incorporate code modifications into a new code version according to the provisions of Section 6.3,
- prepare and distribute new code versions as directed by the Steering Committee,
- manage the finances of the RVUG and ensure expenditures are in accordance with RVUG approved budgets,
- make specific meeting arrangements,
- solicit presentations from RVUG members,
- schedule presentations by other organizations as may be appropriate, and
- record and disseminate the minutes of meetings.

The duties of the **Steering Committee** are to:

- review proposed work scope items and budgets, including fee structures, for the upcoming year and make appropriate recommendations for approval by the RVUG,

- approve work scope and budget revisions between RVUG meetings as necessary to support resolution of emergent issues, and
- approve code modifications as described in the procedures of Section 6.3.

The duties of the **EPRI Project Manager** are to:

- ensure any RVUG fees paid directly to EPRI are expeditiously forwarded to the Engineering Contractor and
- monitor RVUG activities to identify opportunities for synergism with EPRI activities.

4.3 Meetings

- Meeting location, frequency and agenda will be established by the RVUG Chairperson with input from the Steering Committee and the Engineering Contractor. Meeting announcements will be distributed to RVUG members at least 30-days prior to the meeting.
- Nonmember organizations may attend the RVUG meetings by invitation from the RVUG Chairperson; however, the RVUG Chairperson may restrict portions of the meetings to member organizations. A fee may be assessed for nonmember participants at the discretion of the Chairperson.
- The RVUG Chairperson may call for votes on specific issues or resolutions in either restricted or general sessions for the purpose of assessing or demonstrating member's positions.
- Member organizations will be allowed one vote per share by either their primary representative or designee. In the event that the primary representative will be unable to attend a RVUG meeting, he/she may notify the Chairperson that a designee will be attending with the right to vote the organization's voting shares.
- Robert's Rules of Order (or equivalent) will be used during voting sessions.

5. Funding

5.1 Base Funds

The base work scope of the RVUG shall include RETRAN and VIPRE maintenance activities and meetings. Additional development activities to support the **Purpose** of the RVUG should be prepared by the Engineering Contractor for review and approval by the Steering Committee. Upon approval by the Steering Committee, the recommended development activities will be presented to the RVUG for final approval.

The Base Funds should also include a \$25,000 setback to be authorized at the discretion of the RVUG Chairperson to address emergent issues. This setback may be rolled over from year-to-year if unused.

Annual dues should be adjusted by the Steering Committee to fund these activities. The Engineering Contractor is responsible for collection of annual dues.

5.2 Annual Dues Distribution

The procedures for establishing the annual dues distribution are described in Section 6.6, Annual Dues Distribution Procedure.

6. Procedures

The following procedures are included as part of this Charter.

- 6.1** RETRAN Users Group and Steering Committee Voting Procedures
- 6.2** Maintenance of the RETRAN and VIPRE Computer Codes
- 6.3** RETRAN and VIPRE Modification Approval Procedure
- 6.4** Projected Budget and Work Scope Procedure
- 6.5** Voting Share Determination Procedure
- 6.6** Annual Dues Distribution Procedure
- 6.7** Procedure for Selection of RVUG Engineering Contractor

6.1 RETRAN/VIPRE Users Group and Steering Committee Voting Procedure

6.1.1 Introduction

This voting procedure describes the decision-making method to be used by the RVUG and the Steering Committee. This procedure covers decisions requiring the approval of either the entire RVUG or the Steering Committee. Examples of such decisions include: 1) recommendations for code modifications; 2) election of officers; 3) approval of procedures, etc.

6.1.2 Eligibility

Eligibility to vote on decisions of the RVUG is limited to active members. Member organizations will be allowed one vote per share as determined by the procedure given in Section 6.5. Voting shares will be allotted separately for all versions of RETRAN and its ancillary code packages and for all versions of VIPRE and its ancillary code packages.

Only member organizations holding voting shares for a particular code package may vote on issues affecting that code package.

Eligibility to vote on committee decisions is limited to those RVUG members officially recognized to be on the committee by the committee chairperson.

Neither the EPRI Project Manager nor the Engineering Contractor is eligible to vote on any decision.

6.1.3 Voting Criteria

Issues to be decided by the RVUG that involve financial commitment on the part of the RVUG or its members will require notification of the pending vote, and at least a brief explanation of the issue, approximately 30 days in advance of the vote. More detailed information will be provided at a member's request.

Members may vote in person at the meeting or by proxy.

In order to hold a vote on an issue, a quorum consisting of 40% of the eligible voting shares must be represented, unless otherwise noted.

Passage of motions will be in accordance with Robert's Rules of Order (or equivalent). Passage of motions or other decisions not specifically addressed in Section 7.0 of the Charter will require a simple majority of the membership casting a vote.

6.2 Maintenance of the RETRAN and VIPRE Computer Codes

6.2.1 Requirements

The Engineering Contractor shall maintain the current releases of RETRAN and VIPRE under a 10CFR50 Appendix B compliant Quality Assurance (QA) program that has been reviewed and approved by EPRI, a Nuclear Procurement Issues Committee (NUPIC) member organization, or any RVUG member organization. These organizations may audit the Engineering Contractor's QA program at their own expense. Any audit findings or comments shall be resolved by the Engineering Contractor in a timely manner.

Code specific QA requirements will be established by the RVUG Steering Committee and the Engineering Contractor as part of the work scope. The RVUG Chairperson will serve as the RVUG contact for the purposes of the Engineering Contractor's QA program.

Activities to be performed by the Engineering Contractor include:

- Maintain up-to-date code documentation which documents the current theoretical and phenomenological models as well as the run-time options. This documentation may include Theory, Programmer's, User's, Applications, and User Guidelines manuals.

- Maintain current and past released versions of the source code in a readily retrievable format.

Only current released versions of RETRAN and VIPRE shall be corrected unless directed otherwise by the RVUG Chairperson. If a user identifies a coding error in a prior version of RETRAN or VIPRE, the Engineering Contractor shall verify that the coding is correct in the current version. If it has propagated into the current version, the Engineering Contractor shall correct it.

All modifications included in the Base Work Scope approved by the RVUG shall be included in the next release of a code version

- Publish a Trouble Report notice informing users of errors found in the current version of each supported code as well as the remedial actions to be taken. Error corrections shall be made available to all users through an acceptable medium, e.g., a website.
- Prepare RVUG newsletters informing members of coming events, summaries of code applications, technical tips, or other pertinent information for the use of RVUG members.
- Have available knowledgeable individuals who are responsive to users' questions. The Engineering Contractor shall include a reasonable amount of engineering support in each year's maintenance work scope. No more than a reasonable amount of resources (approximately 40 hours) on a user question shall be expended without e-mail authorization from the RVUG Chairperson.
- The Engineering Contractor shall be responsible for setting up and attending RVUG meetings, acting as recording secretary, and issuing minutes of the meeting.
- The Engineering Contractor shall maintain a website for communicating project related information to the RVUG membership and code users.

6.3 RETRAN and VIPRE Modification Approval Procedure

6.3.1 Purpose

This procedure describes the process and responsibilities for evaluating and approving incorporation of proposed code modifications into new RETRAN or VIPRE code versions. Error corrections are not within the scope of this procedure.

6.3.2 Responsibilities

- Steering Committee Chairperson

To receive modification requests and to ensure that they are disseminated to steering committee members for their review.

To serve as a liaison between the originator and the Steering Committee.

To conduct voting for acceptance or rejection of a modification request.

- Steering Committee

To make recommendations to the RVUG regarding whether to approve, modify, or reject a code modification request.

- RVUG Member

To vote to approve, modify, or reject code modification request.

- EPRI Project Manager

If requested by the RVUG, to request EPRI to fund an approved code modification.

- Engineering Contractor

Work with the RVUG Chairperson and the initiator of the modification request to provide the work scope, impact, schedule, and cost estimates for the proposed modification.

- Initiator of the Code Modification Request

Provide a description of the requested code modification.

Be available to provide additional information during the Steering Committee and RVUG meetings.

Allow adequate lead time in submitting the modification request to the RVUG Chairperson to allow review and distribution of the request to members of the Steering Committee prior to the next Steering Committee meeting.

6.3.3 Procedure

- **Initiate the Code Modification Request**

Any RVUG member, the EPRI Project Manager, or the Engineering Contractor may submit a code modification request to the RVUG Chairperson. The submittal should include a description of and the reason for the proposed code modification and an estimated schedule for the completion of the modification.

- **Review and Approval of the Code Modification Request**

- All code modification requests will be forwarded to the Engineering Contractor.
- The Engineering Contractor should develop a work scope, budget, and schedule for the modification and forward the package to the RVUG Chairperson. The work scope and budget may be integrated with other modification requests.
- The RVUG Chairperson should distribute the modification package (or a summary) to the Steering Committee.
- If the Steering Committee determines the modification should be included in the Base Work Scope, the Steering Committee recommendations shall be presented to the Users Group.
- No modification shall be made to supported versions of the RETRAN or VIPRE software packages using RVUG funding without the RVUG approval.
- Documentation of the code modification request process should be provided in the meeting minutes of the RVUG meeting in which they were addressed. If the modification request was evaluated by a remote voting process, the documentation should be distributed to the RVUG in a timely manner, e.g., by placing them on the world wide web.

6.4 Projected Budget and Work Scope Procedure

6.4.1 Projected Budget

Annual Dues shall be estimated by the Steering Committee for the coming year based upon the previous year's dues, expected membership changes, expected changes in base work scope, and any development activity.

6.4.2 Projected Work Scope

A projected work scope for the coming year should be prepared by the Engineering Contractor. At a minimum, the projected work scope should include:

- maintenance activities such as error corrections and software control activities,
- quality assurance program maintenance,
- RETRAN and VIPRE user consultations,
- modifications approved by the Steering Committee,
- other items as identified in Section 6.2,
- releasing new code versions, and
- supporting NRC review activities for new code versions.

The work scope can include development of ancillary codes as well as modifications to the parent code.

6.4.3 Reconciliation

By the end of May of each year, the Steering Committee shall convene and reconcile the projected budget and projected work scope for the upcoming year. The estimated annual dues can be determined at this time. The Chairperson should forward the recommended budget, work scope, and estimated dues to the RVUG membership at least 30-days prior to the approval vote.

6.4.4 RVUG Approval

The recommended budget, work scope, and estimated dues for the upcoming year should be approved by the RVUG prior to the end of June. The approval may occur at a meeting or through the remote voting process.

6.5 Voting Share Determination Procedure

6.5.1 Purpose

This procedure defines how Voting Shares are to be determined for RVUG Members.

For each code package (i.e., RETRAN or VIPRE, including all supported versions and ancillary computer codes for each) for which an organization pays membership dues:

- each Utility Organization shall be allotted voting shares based on their yearly dues divided by the rate charged for a single unit utility, rounded to the closest one-quarter of a voting share,
- each Research Organization shall be allocated one voting share, and
- each Commercial Organization shall be allocated voting shares based on their yearly dues divided by the rate charged for a single unit utility, rounded to the closest one-quarter of a voting share, with a limit of three voting shares.

6.6 Annual Dues Distribution Procedure

6.6.1 Annual Dues

Estimation of dues shall be made in accordance with the procedure described in Section 6.4 and distributed to the membership. The membership shall vote on the budget and dues assessment for the next year. Voting shall conform to the requirements of the RVUG voting procedure.

The annual membership fees for each code package (i.e., RETRAN or VIPRE, including all supported versions and ancillary computer codes for each) for which an organization wants maintenance and support: are determined as follow.

- Each Utility Organization shall be charged a base rate plus an additional amount multiplied by $(N - 1)$ where N is the number of units for which the computer code package is used for plant support, such as plant design, licensing, training, or related activities. The annual dues will be capped for both RETRAN and VIPRE for each organization. These caps will be individually set for each computer code as part of the budgeting process
- Each Research Organization shall be assessed a flat fee, negotiated with the Engineering Contractor and approved by the RVUG Chairperson.
- Each Commercial Organization shall be charged the base rate equivalent to a single unit Utility Organization. Additionally, IF the Commercial Organization provides engineering services such as design, licensing, training, or related activities using any version of RETRAN-3D or VIPRE-01, or their ancillary codes, or derivatives thereof, AND the contracting organization is NOT a member of the RVUG, the Commercial Organization shall be charged an additional amount equal to that charged Utility Organizations, multiplied by $(N - 1)$, where N is the cumulative number of non-member organization units for which the code is used during any calendar year.

Annual fees due for applicable engineering services to non-member contracting organizations will be invoiced using Commercial Organization's statement of the number of units for which covered services are provided that will be included as part of the Annual Membership Form. Additional fees become due upon execution of a contract to perform services for non-member organizations not listed with the Annual Membership Forms. Said fees are not prorated for a portion of a calendar year. Prior to the end of the calendar year, the Commercial Organization will notify the Engineering Contractor of any additional units supported during the year that were not listed on the Annual Membership Forms for the current year. An invoice will then be issued to the Commercial Organization for the additional dues owed.

- The base rate shall be 67% of the year's approved work scope budget, less any flat fees, plus the difference between the amount computed from the per-unit formula

and the cap amount for organizations that would exceed the dues cap established above, all divided by the number of participating organizations, excluding those paying flat fees.

- The additional per-unit amount shall be the remainder of the year's approved work scope budget divided by the number of units for which the code package is used to support design, licensing, training, or related activities.

6.6.2 Provision for Reduction of Annual Dues

Members may request a reduction in their annual dues based upon the provision of alternate considerations in lieu of monetary remuneration. Any reduction in annual dues requires the same level of approval by the RVUG as other budgetary and work scope issues.

6.6.3 Limitations

Consistent with sound business practices, no expenditures of RVUG funds shall be made outside of areas contained in the RVUG approved budget without a vote taken in accordance with the RVUG Voting Procedure. Notwithstanding this requirement, the RVUG Chairperson shall be authorized to expend up to \$25,000 per year in the interest of the RVUG on any activities that require immediate action.

Any unused funds carried over from one year to the next will be used to complete the associated ongoing work during the following year. If the tasks are complete or cancelled by the RVUG, the funds can be used to reduce the dues for the following year, or used to fund other work as determined by the RVUG.

6.6.4 Financial Statements

During the first month of each calendar quarter, the Engineering Contractor shall prepare and electronically distribute a Financial Status for each code family being supported. The Financial Status shall include:

- tabulation of expenditures, including a brief description of the status of that expenditure;
- an accounting of funds carried forward, and the percentage of which is earmarked for ongoing work;
- an accounting of accounts receivable (summary); and
- a status of membership that includes the

- members in arrears,
- members whose voting privileges have been revoked, and
- new memberships/canceled memberships.

6.6.5 Billing

The Engineering Contractor will issue invoices in December of each year to RVUG members. Those organizations which have special agreements with EPRI will be billed in accordance with their agreements with EPRI; however, they will be considered members in good standing, as long as they have made a commitment to be a member in a given year.

The EPRI Project Manager shall make the RVUG dues committed through special agreements with code licensees (typically international organizations), available to the Engineering Contractor upon their receipt.

Invoices will include current balance due as well as any amount in arrears. Appropriate references shall be made prior to billings as justification for the amount shown in arrears. Other invoices shall be issued, as voted upon by the RVUG, to assess members the cost of RVUG approved modifications. Each member's billing assessment for approved modifications shall be the contractor's cost estimate for the modification. Members shall be considered in arrears when their accounts payable exceed six months. Members in arrears shall have their membership revoked.

6.6.6 New Memberships

Any organization wishing to join or rejoin the RVUG shall

- satisfy all applicable EPRI Licensing requirements for gaining access to the software and
- agree to pay current year's dues and any initiation fee or a rejoining fee established by the RVUG membership.

6.7 Procedure for Selection of RVUG Engineering Contractor

Within a year prior to expiration of the existing License Agreement between the Engineering Contractor and EPRI, the membership will advise whether the contract will be renewed with the Engineering Contractor or be put out for competitive bids. If the contract is put out for competitive bids, a Selection Panel will be formed to evaluate proposals and select a contractor. The Selection Panel will be chosen as follows:

- EPRI members will be chosen by the EPRI Project Manager,
- RVUG members will be chosen by the RVUG Chairperson,

- the Selection Panel shall include representatives from utilities having BWRs and from utilities having PWRs. A conflict of interest shall preclude a RVUG member from serving on the Selection Panel, and
- a majority of the Selection Panel shall be RVUG Members.

Contract renewals with a satisfactory contractor shall be made in accordance with EPRI license agreements and procedures.

7. Amendment

This charter, exclusive of the Procedures identified in Section 6, may be amended at any meeting of the RVUG, or by signed documentation (e.g., regular mail, fax), by a two-thirds majority vote of all current members. Proposed amendments must be provided to the RVUG membership for review and comment at least 30-days prior to any voting process.

The Voting Share Determination Procedure and the Annual Dues Distribution Procedure, described in Sections 6.5 and 6.6, respectively, may be amended at any meeting of the RVUG, or by signed documentation (e.g., regular mail, fax), by a two-thirds majority vote of all member shares.

All other Procedures in Section 6 may be amended at any meeting of the RVUG Steering Committee, including telephone conferences or e-mail notices, by a simple majority vote of the Steering Committee.