
DEEPSTAR® PHASE XI

Business and Operating Plan

January, 2012 (draft 10/25/11)



*Leading technology development to meet industry's deepwater
business needs*

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1.0 DEEPSTAR® OVERVIEW

The DeepStar® Program identifies and develops economically viable, managed risk methods to produce hydrocarbons from deepwater. Deepwater areas of the world contain significant reserves and remain one of the best exploration and development opportunities for oil companies. However, producing hydrocarbons in deepwater presents commercial and technical challenges. Within DeepStar oil companies, vendors, regulators, academic institutes and research organizations cooperate to develop technologies necessary to meet these challenges. In doing so, each Participant reduces cost and risk of developing technology with leveraged funds and the collective wisdom of 1000+ Subject Matter Experts (SMEs) in areas absent of competitive advantage (to the oil companies). DeepStar offers Participants the opportunity to significantly leverage their technology investment and for Contributors to gain a firsthand understanding of Oil Company technology needs. The DeepStar Program was initiated in 1991 and is administered by Chevron Energy Technology Company. Phase XI commences in January 2012 and will end December 31, 2013. Several Phase X projects will still be open at the commencement of Phase XI; however, most are expected to be completed by Q2 of 2012.

2.0 DEEPSTAR PHASE XI STRATEGY

2.1 Mission and Goals

DeepStar Phase XI mission is to facilitate a cooperative, globally aligned effort focused on identification and development of economically viable methods to drill, produce and transport hydrocarbons from deepwater. DeepStar Phase XI focus is on global ultra deepwater development in water depths to 10,000+ feet.

DeepStar's primary goals are:

- **Enhance existing deepwater technologies** by improving the profitability, operability, flexibility and reliability of existing deepwater production systems.
- **Develop new enabling deepwater technologies** by advancing novel technologies to allow production in areas that are currently technically unproven with the ultimate goal of developing technologies required for economic production in 10,000+ ft water depth.
- **Gain acceptance of deepwater technologies by regulators and industry** by facilitating the development of industry standards and practices as appropriate and fostering communications with regulatory agencies.
- **Provide a forum and process for discussion, guidance and feedback** with contractors, vendors, operators, regulators and academia, regarding deepwater production system technology capability gaps, and promote standardization of component interfaces.
- **Investigate and frame the use of new technologies** which enable step changes in ultra deepwater development. Develop avenues for further development of these technologies via joint industry projects, RPSEA funding or through partnerships with Demo 2000, ITF, etc.

DeepStar tends to focus on the front end of the technology cycle by advancing critical fundamental knowledge (science), providing proof of concepts and performing engineering studies. DeepStar Phase XI focus is on technology development for:

- Drilling, completion, and intervention breakthroughs
- Appraisal and development of geosciences and reservoir engineering
- Significantly extend subsea tieback distances/surface host elimination
- Dry trees/direct well intervention and risers in 10,000 feet water depth
- Continuous improvement/optimization of field developments

The process DeepStar utilizes brings a clear operator statement of technology needs and system performance requirements.

2.2 DeepStar's Value

DeepStar creates value for its Participants by developing knowledge and understanding through its members, and delivering products and services through the vendor community. The performance measures (results, process and behaviors) for DeepStar Phase XI are outlined below in Table. 2.1.

Phase XI Goals	Deliverables and Target Date	Value
DeepStar priority and primary focus in the first half of 2012.		
Phase X Projects	Complete Projects with quality on schedule or earlier, and at least 30 days prior to contract end date	Significant value is generated from a project's final report. The earlier it is completed, the earlier the results can be applied to impact a deep water (DW) project's value.
Phase XI Projects	Transform all approved CTRs to RFPs within 60 days – including Champion and Working Committee review. Solicit, receive and review proposals, negotiate and award contracts within an additional 60 days. Deliver Capital Stewardship with a focus on delivering specified SoW at lowest cost. Increased level of Contributor leverage towards accomplishing technical goals.	Money and resources are committed. The earlier a project is commenced, the earlier learnings / results are available to apply to meet DW business needs. The Contributor community is ultimately the technology 'commercializer'. Their input and contributions to Projects can provide a faster / better way forward, benefiting all stakeholders.
DeepStar priority and focus for 2H12 and 2013		
Phase XI Projects	Execute projects such that all Deliverables are received, reviewed, approved and uploaded to website on or before schedule deadlines.	The effective execution of quality contracts provides new technologies to meet Member needs.
Member Participation:	Demonstrate greater direct member company participation in projects (sub-committee membership, attendance to meetings/presentations/website usage). Update the website to maximize the benefit to users.	Objective is to maximize DeepStar value to member companies. Having direct involvement in a project considerably enhances value obtained compared to only reviewing project reports on completion.
RPSEA UDW Program	Via member company SMEs, influence to align and / or leverage RPSEA UDW program with goals / focus of DeepStar.	Use DeepStar resources to steer RPSEA program for the maximum benefit of the UDW oil and gas

Leverage	Pursue shared synergies to reduce inefficiencies.	industry.
Member Acquisition:	Add industry leading Participants and Contributors.	Additional funding for projects and SMEs for review and participation.
Phase XII Goals	Review progress to date and Member needs to develop Goals and Strategies for Phase XII during 3Q12	Ensure member needs are properly integrated into Phase XII planning.

Table 2.1

DeepStar will not dedicate significant resources to collect and analyze data but will measure performance using surveys / anecdotal evidence / IT tracking tools / interviews / success stories to gauge and monitor metric achievement.

2.3 DeepStar Governance Guidelines

Organizations such as corporations, LLCs, LLPs, etc. are generally governed by a Board of Directors acting in accordance with By-laws, Articles of Incorporation, and other documents which may be filed and on record. DeepStar is not a legal entity but a contractual relationship as defined in the respective “DeepStar Phase ‘x’ Membership Agreement (Agreement)” and as may be controlled by the laws of Texas and other such jurisdictions that may apply. The Agreement defines the decision making (majority), fee structure, payment / invoicing details, IP & ownership, liabilities & indemnifications and all other understandings between the signatory parties¹. It also references in § 3.3 a “DeepStar Business and Operating Plan” which describes the “organization and function of all DeepStar technical committees”. The Agreement goes on to say “...Notwithstanding....in the event a committee is unable to reach agreement or there are other causes for delay or difficulties, Chevron reserves the right to direct all remaining work for that project to achieve a final conclusion in order to provide related DeepStar Phase XI Deliverables.” In § 3.4 “The Management Committee shall provide vision, leadership, consensus, approval and strategy for the performance and execution of the DeepStar Phase XI Project. It will perform its function by giving general guidance to the DeepStar Project Director, Technical Committees and the Contributor Committee. Management Committee members will work with Chevron’s DeepStar Project Director to select and establish the priority of work activities.” The DeepStar Management Committee serves DeepStar as a Board of Directors would serve the stakeholders of a corporation.

The following guidelines are derived from and align with generally accepted “Corporate Governance Guidelines” as published by many major corporations and as championed by the National Association of Corporate Directors (www.NACDOnline.org). These Governance Guidelines apply to all aspects of the DeepStar organization and operation.

Principles of good governance:

Rights and equitable treatment of shareholders: DeepStar should respect the business needs of the Participants who provide the bulk of the funding. DeepStar can help the

¹ §11.4 “Membership Agreement states the entire understanding between the Parties, and supersedes, cancels and merges all prior representations, understandings, covenants, or agreements, whether oral or written, with respect to the DeepStar Phase XI subject matter.

Participants by openly and effectively communicating information and by encouraging Management Committee members to participate in general meetings and employees of Participants to participate in Technical Committee and Working Committee meetings.

Interests of other stakeholders:

DeepStar recognizes that Contributors, Honorees, and regulators have varying legal, contractual, social, and market driven rights and that DeepStar has obligations to non-members, including employees, contractors, creditors, suppliers, local communities, and customers.

Role and responsibilities of the committees:

The various DeepStar committees need to be populated with volunteers of sufficient relevant skills and understanding to execute their roles and responsibilities as detailed in section 5. Adequate member participation and group interaction is critical to DeepStar's success. Figures 2.1. A and B illustrate the dynamics of group decision making.

Initial diverse opinions and brain-storming activities can serve to make sure that all participants have input and contribute. However, if carried on too long, there can develop a perspective that the group is wasting time. Ideally before reaching that point, good group dynamics will result in consolidation and convergent thinking, arriving at the best solution.

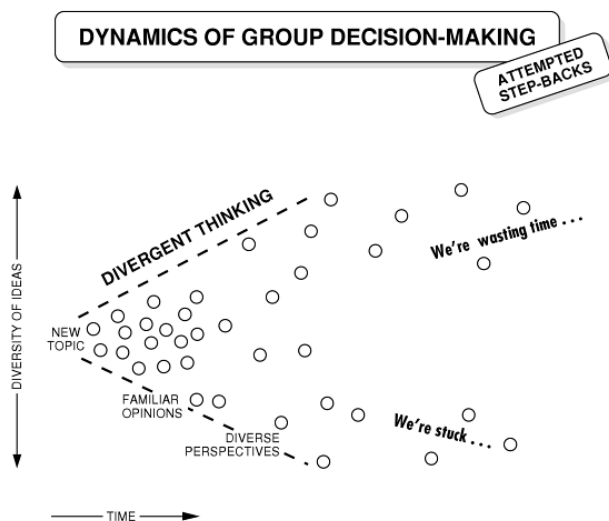


Figure 2.1 A

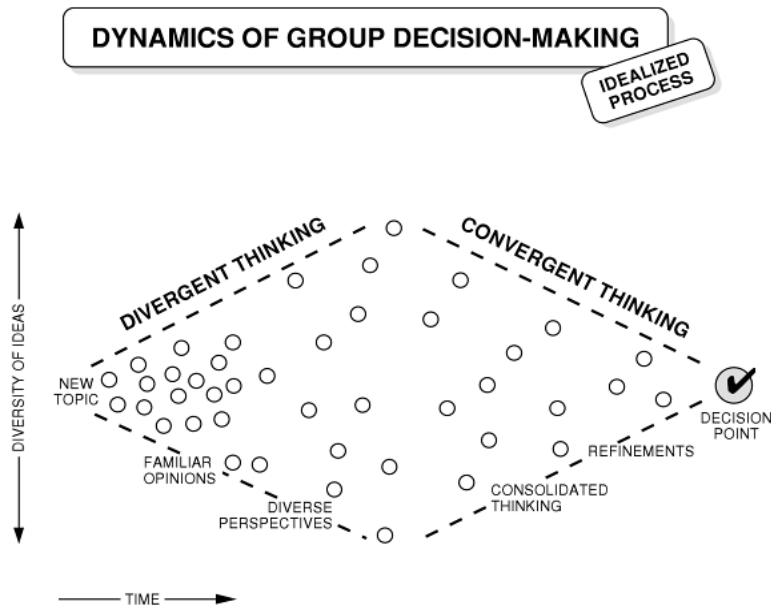


Figure 2.1.B; From 'A Facilitator's Guide to Participatory Decision-Making' by Sam Kaner

Integrity and ethical behavior:

Integrity is a fundamental requirement in choosing Technical Committee chairs and co-chairs. Management Committee members must conduct themselves in a manner that promotes ethical and responsible decision making.

Disclosure and transparency:

DeepStar should clarify and make known to all members the roles and responsibilities of Management Committee, Technical Committees, and DeepStar staff to ensure alignment of accountability.

3.0 Industry Cooperation

DeepStar's vision for the development of deepwater technology is closely tied to the concept of cooperation and evolution of a synergistic relationship with all members of the oil and gas community. In today's environment, cost effective development of deepwater fields will be difficult, if not impossible, without significant improvements in production technologies. New technologies will most likely evolve within a jointly funded, cooperative effort. DeepStar is open to industry participation in the following two forms:

- Direct Operator participation in the form of a membership fee and active involvement in DeepStar technical committees.
- Vendor participation in the form of voluntary contribution and technology services.

Oil and gas company participation ("Participants") in DeepStar is in the form of a fee for each phase of the program. The fee is considered cumulative for participation entry, considering earlier phases of the program, because prior work is used as the foundation for current and future studies. These fees provide the funds needed by the program to

progress technology development activities. It is anticipated that participating companies will also contribute prior knowledge / information where appropriate for the benefit of all of the DeepStar Participants. This will allow DeepStar funded activities to progress industry-needed technology and avoid duplicate work.

Vendor (“Contributors”) involvement in the DeepStar program is primarily in the form of voluntary technology contributions. Each contributing vendor will be asked to provide man-hours or services directed toward technology issues in the area of the vendor’s expertise. The vendor is not restricted or limited in the amount of technology services that can be provided to the DeepStar program. Contributors will be provided access to pertinent sections of DeepStar reports during the participation period. It is hoped this information will aid or guide vendors in focusing their future technology development programs on those products or services most needed by the operator company participants. Contributors are invited to DeepStar technical meetings; however, it may be necessary on certain occasions for Participants to meet individually with Contributors to protect the confidentiality of their proprietary information.

3.1 Anti-Trust Issues

The DeepStar program is a technology development program that brings together the industry’s leading experts in a common multi-discipline forum to address technical issues confronting economically viable deepwater production. It is open to involvement by any member operator or vendor that would benefit from the technology that evolves from the program.

Each DeepStar party agrees that in performance under the DeepStar Agreement, they will comply with all applicable laws and regulations, including, without limitation, the export laws of the relevant countries which relate to data or information, software and hardware under the DeepStar Agreement.

Specifically topics that will not be allowed to occur at any DeepStar meetings are:

Anti-Trust

- Price fixing or the establishment of policy for products or services sold
- Plans for development of new marketing or manufacturing strategies

Restraint-of-trade

- Establishment of cost databases on prices quoted for specific projects
((All cost information should be provided by participants in a generic manner and not identifiable to specific vendors or contractors.)
- Standardization of bidding for products or services provided by vendors or contractors in a manner that would be considered in violation by restraint-of-trade policies.

4.0 DEEPSTAR PHASE XI WORK PROGRAM

4.1 Technology Focus Areas

The DeepStar technology focus areas, plus regulatory interface and administration, have been organized into the following Technical Committees:

Geosciences Committee (11000) addresses challenges in prospect and reservoir delineation, characterization and surveillance which are either specific to deepwater provinces or which relate to appraisal and development decisions leading to significant economic impact in such provinces.

Regulatory Committee (11100) provides liaison between DeepStar technical committees and governmental regulators such as the Bureau of Safety and Environmental Enforcement (BSEE), Bureau of Ocean Energy Management (BOEM) and the US Coast Guard. The objective of the committee centers on the exchange of technical information between the working technical groups in DeepStar and regulatory representatives. The Regulatory Committee also works and communicates with leading industry organizations, such as the OOC, API, and others. The objective of this interface between DeepStar and other parties is the expedient full review of relevant issues involved in deployment of new tools or processes under development.

Flow Assurance Committee (11200) goal is to assure reliable and economic production in deepwater by appropriate design and operation through prediction of fluid behavior, flow management, and remediation of deposition and line plugs from the reservoir to the point of sale.

Subsea Systems Committee (11300) goal is to develop technology and qualify equipment to enable the deployment and IMR of “subsea facilities for 50+ mile tie-backs in 10,000 foot water depth.”

Floating Systems Committee (11400) role is to further technology and fill gaps related to deepwater floating systems and their associated moorings and risers.

Drilling and Completions Committee (11500) members share their experiences and data to identify technology improvements in deep water drilling, completion and well intervention operations.

Administration and Technical Support (11600) - The Program Director heads this committee and oversees DeepStar’s leadership and administration responsibilities.

Reservoir Engineering Committee (11700) looks at trends that are of significant generic interest to the industry, while avoiding detailed reservoir issues where participants have competitive concerns. The committee has assembled the best available public domain information for use in learning global characteristics of deepwater reservoirs.

Met-Ocean Committee (11800) goal is to improve knowledge and modeling capabilities of ocean currents, waves and wind which will provide more accurate facility design criteria and reduce downtime during deepwater drilling operations.

Systems Engineering Committee (11900) has the responsibility for analyzing existing and / or potential technology gaps, especially at the facility systems level and bringing them to the attention of the committee best suited to carry out further work in the specific technology area.

4.2 Resource Focus

Technology resources will continue to be focused on DeepStar’s primary goals. Phase XI funding will be derived by having eleven (11) operator Participants as of January 1, 2012. In addition, approximately \$840,000 will be rolled over from phase X for a total available budget of \$8,640,000. Refer to Appendix A for a listing of the CTRs approved

in Round 1 balloting. Round 2 balloting is expected to be completed in 4Q 2012 (if needed).

4.3 Operating Framework

The framework developed within the program provides a means to identify, develop, and approve CTR Plans (Cost, Time, Resources) that are aligned with the overall goals of Phase XI. It is intended to provide both technical guidance and a process to support the decision-making process. The framework provides an overall philosophy that is used by the Management Committee to develop and communicate a plan that will help in achieving Phase XI goals. The overall approach to deliver on Phase XI goals is described as follows:

- 1) Identify key enabling and enhancing technology issues that need to be addressed to achieve the overall goals. Issues unique to certain concepts will be identified as well as those that pertain to a range of concepts. The issues will be high-graded to ensure the most important ones are addressed.
- 2) Work with the Technical Committees to develop CTRs that address the key issues which align with DeepStar's focus. Technical experts within DeepStar Committees will perform an evaluation of high-level issues.
- 3) Identify potential means of addressing the issues which may include DeepStar funded studies, separate spin-off JIPs, other ongoing JIPs or deferral.
- 4) Management Committee approves CTRs with the highest potential value to the DeepStar Participants.

4.4 CTRs

CTR's are prepared for each technical study that will be performed in the DeepStar program. While they may be prepared by any Member, they must be championed by an SME from a Participant. The CTRs should adhere to the CTR format and the business case / justification outline the task objectives, work scope, and deliverables, along with funding, schedule, and personnel requirements. They should also align with Committee Roadmaps and Participant's technical needs. Related CTRs are often grouped into major focus areas and consolidated into themes. The respective committees then vote and rank on the CTRs before presenting to the Management Committee for consideration.

Not all committee CTRs will be funded due to program budget limitations. However, unfunded CTRs modified old CTRs and new CTRs may be presented for Management Committee balloting during a phase for reconsideration, provided funding is available. Funded CTRs may be refined and updated by the Champion and Technical Committee as work is kicked-off and progresses. However, any significant changes to work scope must be approved by the Management Committee and kept within the budgets and schedules established for the program, unless formally revised by the Management Committee.

4.5 Work Plans

Each funded CTR is transformed into a RFP (Request for Proposal) and qualified firms are invited to submit proposals. Proposals are then reevaluated by the Champion and Working Committee – a subset of the Technical Committee with direct interest and subject matter expertise (usually Participant companies only) and the recommended award is reviewed and approved by the DeepStar Director. This process is managed by

the DeepStar staff and utilizes Chevron's procurement and contracts team. The resulting contract for the work will contain Scope of Work, Deliverables, Schedule, budget and other contracting conditions. Refer to Appendix B for CTR Development Guidelines.

4.6 Program Growth

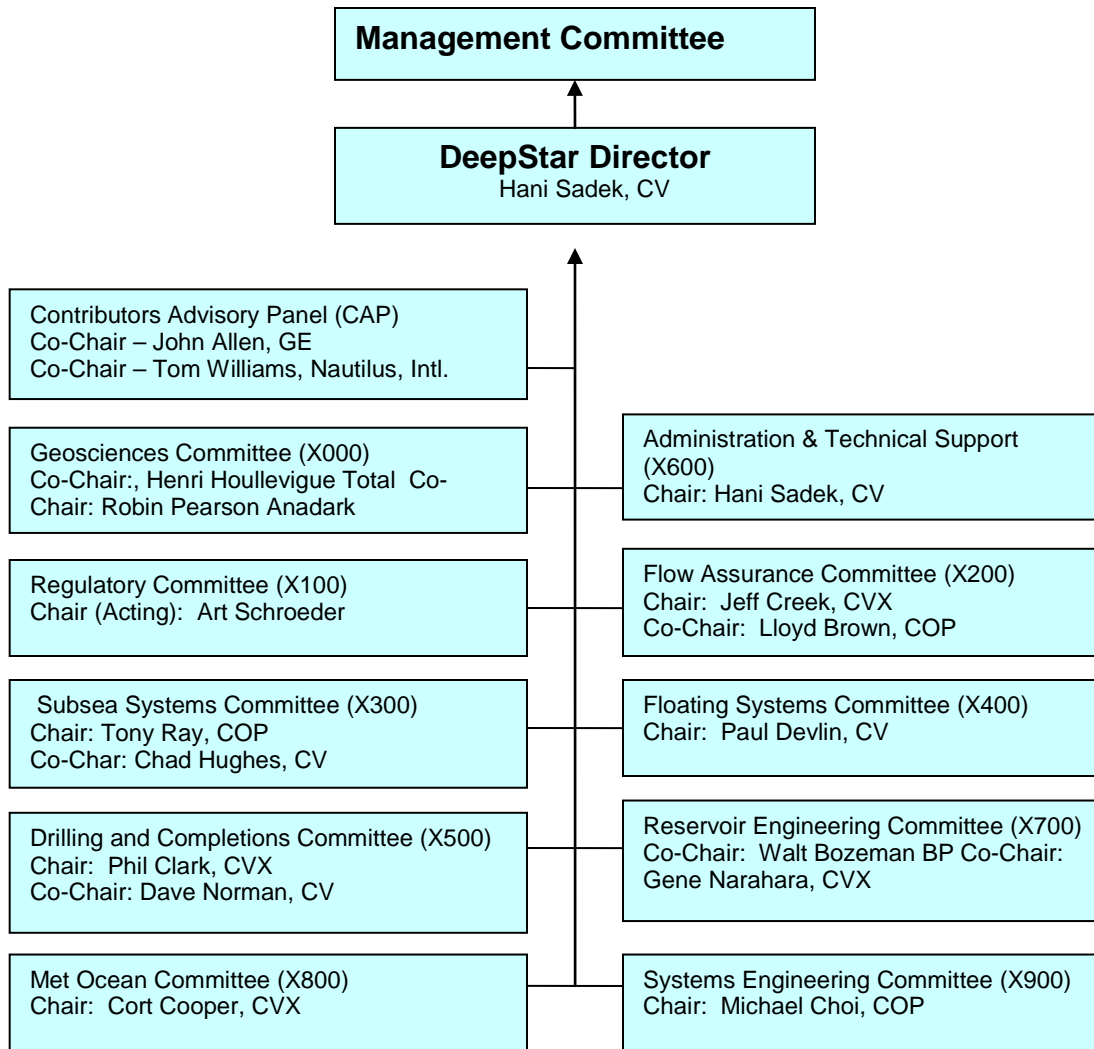
With each new operator company, the Participant's total fee and entrance fee will be used to expand the technical work scope of DeepStar Phase XI and are subject to the same provisions of DeepStar Phase XI. As work programs are agreed upon and funding becomes available, CTRs will become part of the "Approved Work Program".

5.0 PROGRAM ADMINISTRATION

5.1 DeepStar Director

The DeepStar Director is responsible for establishing the basic program goals and operating plan for the Management Committee. Cost and schedule control, progress reporting, generation and distribution of all final technical documentation are the responsibility of the DeepStar Director and DeepStar team.

The DeepStar Phase XI Organizational Structure is as shown below:



5.2 DeepStar Team

Chevron has assembled a project team dedicated to the successful implementation of the DeepStar program. The DeepStar team consists of a Program Director, technical support specialists, administrative support staff, legal and comptrollers. The DeepStar team is located in the Chevron offices in Houston, Texas and will execute all work activities in an ethical manner under the authority guidelines established by Chevron for this department. The DeepStar Team is administered by the 11600 Committee chaired by the Program Director.

5.3 Management Committee

DeepStar is governed by a Management Committee created from senior representatives (Senior Advisors) of the operator Participants. Each participating company has the right to have a voting representative on the Management Committee. Time spent by the various Management Committee members on committee activities will not be billable to

the DeepStar program. The Management Committee is intended to oversee and guide the execution of the entire DeepStar program. Roles and responsibilities include:

1. Mission accomplishment

- Define and promote DeepStar mission
- Define / approve DeepStar's slate of projects
- Communicate results of DeepStar accomplishments broadly

2. Leadership

- Select and support Technical Committee chairs & co-chairs.
- Select and support Technical Committee "voting reps"
- Encourage and support project Champions and SME participation
 - Development of quality / aligned CTRs
 - Timely development of Scope of Work
 - Timely review of project Deliverables

3. Conduct of operations

- Define by example the moral, ethical and operating standards of conduct.
- Promote safe operations.
- Endorse compliance with all legal obligations.
- Promote processes aligned with Program values
- Encourage treatment of DeepStar stakeholders in a manner consistent with values.

4. Capital stewardship

- Support investment in the best project opportunities.
- Encourage Contributor value-add

5. Execution

- Decisions are primarily strategic and ensuring alignment with Participant's business needs and priorities
- Projects are completed in a profession and timely manner per SoW.

Further, they provide a coordination link with the various Committee Chairs. Committee members will work with Chevron's DeepStar Team to establish the priority of new work activities as they are brought into the approved Work Program or if modifications to the current program are required through Program Revisions.

The Senior Advisors, representing their respective company interests on the DeepStar Management Committee, decide what actions should be taken based on a (51%) majority-rule voting system. Should an appropriate compromise appear unobtainable amongst the Participants, as when there is a tie in the Participants' vote on an issue, then Chevron reserves the right, as per the Participant Agreement to make the final decision.

5.4 Technical Committees

Technical Committees have been created for each of the nine (9) DeepStar technology focus areas and comprised of representatives from participating operators and equipment/service vendors. Time spent by the various Committee members on Committee activities will not be billable by the Participant or Contributor to the DeepStar program. The current Technical Committee rosters are on the DeepStar Website.

The Technical Committees' role is to identify technology needs and then generate the CTRs for Management Committee review. Once approved and bid-out, their role is to review and recommend award to the DeepStar Director. Once awarded, their role is to oversee the execution of the work outlined in the approved and funded CTRs, either by directly performing the technical activity or by guiding vendors or a specialist-engineering contractor. The Technical Committees will also table discussions / presentations of new technologies and / or challenges that could potentially be addressed within the DeepStar program. Minutes and / or notes will be taken for all Committee meetings by chairs, co-chairs or DeepStar staff and, after approval by the Committee Chair, will be distributed to all Committee members. The contractor will be required to provide written reports on a monthly basis with a final report at the end of the project. Typically, the contractor will also provide quarterly updates at the Technical Committee meetings as well as an oral presentation of the final report. The Project Champion will provide notice of acceptance / of the contractor's invoices and all contractual Deliverables including final report.

Operator Participants are entitled to have representation on all Technical Committees. The Chair and / or Co-Chairs are responsible for the Technical Committee's overall activities and performance. Technical Committees' members will avail themselves to attend all committee meetings and cooperate with fellow members and the Chair to efficiently oversee the execution of the CTRs. They will apply either their own technical expertise or that of their company coworkers, as appropriate, to the technical issues at hand. The Technical Committee Chair will request the person identified as the Project Champion of a selected CTR to focus on guiding the CTR activity through to a successful completion.

5.5 Technical Committee Chairperson

Technical Chairpersons are responsible for the following:

- Lead technical activities of their respective DeepStar Technical Committee.
- Manage committee technical direction and prioritization of technical projects.
- Lead / facilitate Technical Committee meetings.
- Develop agendas for Technical Committee meetings.
- Delegate meeting leadership when absent.
- Communicate with Technical Project Champion and DeepStar Staff periodically to understand project progress.
- Recommend a Technical Committee Co-chair to assist in Technical Committee management and potentially take over Chairperson duties should the Chairperson be unavailable.

With assistance from DeepStar staff, Technical Chairperson duties are estimated to consume approximately three (3) weeks of time per year, including attendance at Technical Committee meetings.

5.6 Contributor Advisory Panel (CAP)

A Contributor Advisory Panel (CAP) is formed with representatives from the vendor / service companies that are Contributors to the DeepStar program. The primary objective of the CAP is to provide comments and suggestions to the Participants regarding issues that are of concern to the vendor / service community. A major focus of the panel would

be improvement of the vendor / operator relationship within DeepStar and the establishment of new channels of communication.

Contributors are invited to attend open Technical Committee meetings whenever this will serve the interests of the program without creating commercial conflicts for the vendor.

Drawings, procedures and marketing material submitted by vendor's supporting the program will be included in the CTR reports provided to all Participants, but may not be included in reports provided to other contributing vendors. Participants will treat confidential vendor information as their own.

5.7 CTR Champion

CTR Champions are responsible for the execution of their CTRs and are held accountable for the deliverables (results, schedule, and cost). A sub-committee, or Working Committee, is usually formed to support the Champion in executing the CTR and providing peer guidance. With DeepStar staff assistance, Champions and their Working Committees fulfill the following roles for each approved CTR:

- Refine scope of work
- Define costs
- Implement CTR
- Select contractors (bid process)
- Submit justification for management approval
- Insure contract implementation
- Arrange Kickoff meeting
- Arrange for progress meetings
- Review monthly reports and provide periodic updates to the Technical Committee
- Maintain consensus
- Approve and confirm contractor invoices
- Approve Final Report

Having a Champion from a Participant company is a requirement for all CTRs. The Champion is driving the effort on a day-to-day basis and is the most effective way to execute a CTR.

- Depending on the type of CTR being performed, he / she may be interacting with the contractor on a regular basis. Where detailed decisions are being made on a daily basis. If the criteria can be set, then the contractor can proceed and communication can be less frequent.
- The Champion has responsibility to make sure all items are proceeding and to expedite all matters. The key is to work with the contractor and make sure key decision-making is done with approval of the DeepStar representatives. The Champion should be empowered to make tactical decisions on his / her own to keep the project moving. There is a judgment call on their part on what needs to be brought to a sub-committee.
- The Champion should be working with a relatively small Working Committee to make most of the necessary decisions concerning the CTR. It is permissible to have a Working Committee cover multiple CTRs that are well grouped, if it is more efficient. This Working Committee should be empowered by the full

Technical Committee to manage projects. Working Committee should have a systems engineering representative where appropriate to encourage integration and overall effectiveness of project work.

- The Champion should keep DeepStar Staff and Technical Committee Chair (co-chairs) informed of major developments, both progress and problems and only bring back items to the Management Committee for decision-making (vote) when significant cost, schedule or delivery quality is at issue. . The Champion and Working Committee should be in communication (that does not necessarily mean meetings) with the contractor on whatever frequency is needed to make quality decisions for the CTR in an expeditious manner. Open communication needs to be maintained between all parties
- Contractual issues with the contractor are identified by the Champion and handled by the DeepStar staff / Project Director.

Refer to Appendix C for CTR Champion's project checklist.

6.0 COMMUNICATIONS AND PUBLICATIONS

The DeepStar website (<http://www.deepstar.org>) is the principle communication medium used by DeepStar. The website was upgraded in Phase IX and consists of the following areas:

- Public Information: Obtain general information about the project, members, and current work.
- Document Library: Search and download of all DeepStar technical reports, monthly reports, meeting notes and CTRs since inception of the project.
- Calendar: Project calendar contains all DeepStar meetings and events unless they are private meetings. Users can download the agenda for upcoming meetings.
- Committees: Allows members of each committee to view/email members, view the latest meeting minutes and any other current documentation.
- Contacts Database: Allows users to search for DeepStar members by either last name or company name. Each member's phone number, address, email and committee membership is listed here.
- Administration: Allows users to update their profile (contact information, password, and committee associations)

There are also advantages and benefits to be gained by communicating outside DeepStar to the industry in general, regulators and other stakeholders. DeepStar funds are limited and typically are utilized to fund lower Technology Readiness Level (TRL) projects. Clearly communicating DeepStar member technical needs to a broader audience via forums, conferences, articles and other vehicles may help encourage alternate funding development activities ultimately leading to technology commercialization. Therefore DeepStar members and contractors are encouraged to present and publish in a general manner DeepStar identified technology needs and direction. Care must be taken however to not divulge confidential and other restricted information.

All presentation and publication of DeepStar materials must be approved by the DeepStar Director. The process for approval is:

- 1) Initiator to review and obtain concurrence from project Champion and Technical Committee Chair
- 2) Technical Committee Chair to recommend to DeepStar Director
- 3) Director review approval

Request for approval should be made far enough in advance to allow at least two (2) weeks review. Where venue permits, presentations should utilize the DeepStar PowerPoint template. All papers and presentations should acknowledge DeepStar contribution. With venues utilizing a 2-step process, approval for abstract submission should be obtained before submission so as to not presume approval. After abstract acceptance, the final paper / presentation should be submitted for final DeepStar approval.

7.0 COST AND SCHEDULE CONTROL

Chevron has overall responsibility for tracking and controlling the disbursement of program funds, and for program implementation according to schedule.

7.1 Cost Control

Chevron is responsible for collecting program entry fees from member companies in accordance with contractual arrangements. An accounting will be made of the fees and the allocation of available funds to each CTR. This will be updated as necessary to account for additional fees (new Participants) or revised disbursements (added or revised CTRs). Expenditures for each CTR will routinely be tallied and formally reported by the contractors in monthly progress reports. Chevron may also elect to more closely track certain CTRs, or to track specific tasks within a CTR at closer intervals if deemed necessary for adequate cost control. Chevron's DeepStar Team will carry out all cost tracking and control, with the assistance of Technical Committee Chairmen and Technical Leaders. While the Technical Committee Chairman has the responsibility to control costs within his CTR, Chevron retains the final authority for resolving any cost control problems.

7.2 Schedule Control

Due to the discovery driven nature of technical development, schedule control of DeepStar projects can be challenging. Sufficient schedule management is required to maintain CTR progress, yet not stifle potential innovation. All contractors are required to provide DeepStar with monthly reports detailing CTR progress and key areas of concern. The monthly reports will be posted on the DeepStar website for all Participants and Contributors to monitor CTR progress. DeepStar Project Managers, CTR Champions and Technical Committee Chairs will utilize these reports to help assess CTR progress. DeepStar may elect to more closely track progress of certain CTRs or tasks within CTRs. The Technical Committee Chairmen are responsible for maintaining the scheduled progress as planned for their CTR group, but the DeepStar Staff will remain the final authority to resolving any scheduling problems.

Appendix A: Approved Phase XI CTRs

Appendix B: CTR Development Guidelines

A standardized system is required for DeepStar committees to ensure that technology development is aligned with the overall DeepStar goals and the DeepStar program objectives are successfully met. A common Cost, Time, and Resources (CTR) sheet format should be consistently used by all technical committees to ensure that the committees have thoroughly planned projects before execution. They will also be used to ensure that the objectives of these projects are properly communicated to parties outside of the committee, and to provide accountability for delivering the results as approved by the senior advisors. The CTR will:

- Define the technology or regulatory need
- Identify the business need for the technology
- Quantify the value of the technology
- Summarize the deliverables and work plan for accomplishing the objectives
- Forecast the budget and manpower requirements
- Specifies the accountability for delivering the work
- Secure and record approval for the project

Refer to the **CTR Process** file on the DeepStar website for complete details.

Appendix C: CTR Project Checklist

Action	Responsible Party
Prepare Bid List <i>*see following note</i>	CTR Champion recommendation to DeepStar Director for approval
Bid Package Include the following: Cover Letter - Request for Proposal Instructions to Bidders – DeepStar standard Bid Form – Develop if needed Scope of Work/Work Instructions CTR – update if needed Documentation Requirements – DeepStar standard Publication Requirements – DeepStar standard Performa Engineering Contract – DeepStar standard	CTR Champion and Working Committee and DeepStar staff
Bid Opening Documentation Form to capture key requested info Bid price must be summarized	DeepStar staff
Bid Evaluation and Recommendation to Award Include technical and commercial Bid opening documentation	CTR Champion and Working Committee recommendation for DeepStar Director approval Committee Chair (and as applicable Co-chair) copied for Info
Letter of Award to Contractor Attach Contract	DeepStar Director

*Prepare Bids

- A recommend a bid list should consist of 3-5 bidders with a minimum of 3 bids should be received and evaluated. A no-bid response may be considered as a bid received.
- Sole source contracts are generally not encouraged. It is possible to sole source a contract where compelling justification can be documented. Typical areas where this might occur either individually or in combination are:
 - Unique capability or expertise. No other options exist to get work done.
 - Schedule is critical and time does not permit a bidding process.
 - Other special business drivers.
- Please notice that continuation of previous work is not specifically listed above. There may be benefits to consider for follow-on work with the same source. These benefits would emerge in a bid evaluation. These should be carefully considered on a case-by-case basis. Compelling documentation is required on sole source contracts. Consideration should be given to others who might be capable of doing the work.

Appendix D: Voting Process

The voting process is intended to allow DeepStar JIP to reach a majority consensus. Voting results are NOT a public matter. Management Committee (MC) members provide private vote selections and may elect to share them with some or all MC members. Sharing specific and individual company votes with anyone outside the MC, including Technical Committees, and especially with any company associated with a project proposal or CTR is inappropriate.

Dialogue regarding why a specific project was not selected is appropriate as long as the information shared is accurate and consistent. Dialogue divulging which company voted for which project is unacceptable. Sharing any voting information other than final outcomes to support / not support funding of a CTR is a breach of MC expectations and compromises the voting process and MC.

The various committees and subcommittees will use the following procedures. In addition to formal written / electronic comments and votes of all subcommittee members, comments and voting may be made verbally by the members present for these meetings and simple majority of those present may decide votes. Technical Committee ballots will be shared with all Participant members on the Technical Committee as well as the MC.

Balloting

- 1) Any member may call for a ballot. Others present, like subcommittee chairman, subcommittee members, CAP representatives, may call for a ballot, but only DeepStar Participants may vote, one vote per Participant.
- 2) The person requesting a ballot, the sponsor / champion, must supply specific wording to the Chairman.
- 3) DeepStar Director / staff will distribute the ballot and request comments from the membership. Each company has the opportunity to comment on the ballot.
- 4) The Chairman and all members are encouraged to comment, but the comments are a separate step from the request for comments.
- 5) After a reasonable comment period, the Chairman and the sponsor will finalize the ballot wording, or the sponsor may, after hearing the comments, withdraw his ballot request.
- 6) DeepStar Director / staff releases ballot for a vote. 'Y - Yes' or 'N - No', 'Option A' or 'Option B.' or 'no commitment' is voted for each option. A 'no commitment' vote is provided for those who cannot support the option being ranked in its current form, but may be supportive of the option should additional funding or other changes be made available. For Ranking decisions, options are ranked from most to least Yes votes or 1 being highest rank to 5 being lowest rank. Each company has a chance to influence support for their favorite options in the comment period.
- 7) Should a tie occur, Chevron has the right to make any required decisions.
- 8) A majority of the DeepStar Participating companies is required to pass.
- 9) Those companies wishing to make their vote public should copy all other members.
- 10) When voting is finalized, each company's vote is recorded in the meeting minutes.