

RHOC 9 June 2008

Path Forward

1. discuss options with DESSC
2. draft joint RHOC and DESSC recommendation
3. submit draft to NSF (rhoc) and UNOLS (dessc)

Time Frame: approve and submit draft before 23 June
(2 weeks), before WHOI Director meets with NSF
leadership

Developments since February

4500 RHOV evaluated, with understanding of capabilities, ROM cost

- can be viewed as intermediate phase toward 6500 m capability (but at greater cost than if we were to go forward with 6500 m now)
- includes most if not all of the exciting engineering aspects of 6500 RHOV (except depth)
- assumes many of the risks of the 6500 RHOV (batteries, sphere, foam)
- possibility of additional unknown risks associated with ABS certification (frame?)

4500 RHOV (cont)

- not as environmentally friendly as originally proposed
- is not an existing NSF project; will need external review (i.e., at risk)
- uncertain costs associated with re-scoping, re-proposing
- uncertain cost of project (but there are sound bases for elements)
- uncertain cost of delay in terms of human resources and loss of expertise
- interest of LM decreases
- interest of WHOI Director, Trustees decreases (subject to vision - Alvin upgrade vs 4500m RHOV)?

6500 RHOV

- cost model modified (cost plus and fixed price), leading to higher cost, lower financial risk. No change in scope.

WHOI Support

- Director, Trustees in favor of retaining HOV capability
 - Interest in raising and/or loaning shortfall, provided
 - NSF contributes additional funds
 - WHOI receives something in return
 - potential for very public fund-raising campaign
 - i.e., NSF Director needs to be involved
 - RHOV is the sell, not an ‘upgraded Alvin’
 - ...hence the ‘4500-m RHOV’
 - Appointments to discuss strategy with NSF leadership
 - Community must be on board
 - Ownership stays with NSF

Some questions for RHOC and DESSC to consider, given the already substantial investment in the RHOV

- Should the United States retain an HOV capability? NRC report says YES; if now NO, what has changed?
- What other considerations besides science are important to consider in making a recommendation to NSF about support for an RHOV?
- How important are depth and environmental considerations for a RHOV?
- Can a 4500m RHOV be proposed and approved in a reasonable amount of time? How rapidly does the cost differential diminish between 6500m RHOV “now”, 4500m RHOV “as soon as possible”?

6500 Meter RHOV

Pro: Achieves original goals to max extent practicable
Opportunities for education and outreach as well as science

Con: Highest cost near-term option
Requires NSF and WHOI large amounts of funds
Possible privatization of National Asset if significant outside money is required

4500 Meter RHOV

Pro: Most capabilities achieved
Opportunities for education and outreach as well as science

Con: Time to develop a new proposal and realistic cost estimate
Requires NSF and WHOI large amounts of funds
Assumes many of the same risks as 6500m RHOV plus others (approval, additional/different ABS certification issues)

Alvin

Pro: Low cost option

Con:
ABS certification costs unknown
Navy may not transfer title of vehicle
Unknown remaining life
Capability limited to current vehicle

No HOV capability

Pro: Lowest cost option

Con: No United States Deep HOV capability