

## U.S. ITER Forum

### Friday Morning Session

**What should be the US strategy for ITER negotiations and planning?**

#### **A. Procurement packages:**

One of the most visible aspects of the ITER construction phase is the constitution of the so-called procurement packages (there is officially 85 packages). These packages consist of all the ITER systems including aspects such as cooling systems, vacuum vessel, magnets, blankets, diagnostics, *et cetera*, ....

Which type of contributions should the U.S. recommend at the negotiating table? What are the connections, or “linkages”, between construction-phase activities and research-phase activities?

Three potential scenarios have been suggested during the construction phase; which scenario would serve the U.S. the best, while contributing to the success of ITER? One major consequence of these scenarios relates to the ability of a central team to manage budgeting and scheduling of individual systems within a party. In other words, how much decision-making authority should the U.S. delegate to a central team when making its contributions to ITER?

Possible construction-phase scenarios:

**Scenario 1:** The U.S. (and other parties) contribute to ITER “in kind” only, which means that all the procurement, construction, testing and installation at the site are done by the parties. The role of the central ITER team would be minimal, limited to coordination for example.

**Scenario 2:** The parties contribute to an ITER central team in “cash” only. The central organization then takes charge of all procurement, construction and installation through bids. The procurement may be a truly international open bid process or a so-called “just return” bid process (*i.e.* 10% contribution corresponds to 10% bids back in the party).

**Scenario 3:** Hybrid, The most important packages (the ones we value the most, *e.g.* 25 or 50% of total) are “in-kind” and the rest is in “cash”.

What should be the relationships, if any, between construction-phase contributions and research-phase responsibilities and activities?

**B. How should we rate our participation in packages/activities? (metric)**

Metrics provide a way to assess the importance of a given package/activity (especially in the construction phase) and to give our negotiators an objective approach to selecting the activities for the U.S. The Burning Plasma Physics Advisory Committee (BPPAC) has suggested metrics for this purpose. Are these metrics complete and/or adequate? Overall, what should be the relative importance of these elements?

In importance order:

1. How does the activity position the US for research on ITER?

Should there be an “official” link between the type of contribution (construction) and the type of participation in the research phase? Or should it be simply proportional to the level (\$) of participation?

For example, would a contribution made of divertor cassettes make the US involved in divertor research only?

2. Is the proposed activity or package "cost-effective" from the perspective of (ITER-value / dollar)?

Do we get the maximum use of the dollar “spent” for the “official” ITER value? An ITER value is the official estimate done by the parties for each individual system. What is the level of risk? What R&D would be required to fulfill the obligation?

3. Is this activity's area one of US relative strength or leverage?

Is this an activity where clearly the US has worldwide expertise or has been traditionally a worldwide leader?

4. What does the activity contribute to US fusion program?

Would this activity or package impact the US fusion program? How would this contribution affect future developments, such as for a DEMO, CTF, or for other configurations? Does it develop expertise?

5. Does the activity enhance the fusion-relevant capability of US industry?

Does this activity promote the development and growth in key industry areas and expertise in fusion related technologies?

6. Is the activity an opportunity for US industry?

Is there an opportunity for important procurement for which US industry would directly benefit?

7. Does the activity contribute to the development of the US fusion workforce?

How would this activity enhance the capability and expertise of the US workforce? What aspect would be natural ground for training, growth, and career paths? Which areas would expose workers to challenging tasks, or state-of-the-art technology.

**C. Other elements for discussion**

Are there other top-level issues/metrics pertaining to the U.S. ITER negotiating strategy that you think need to be addressed?

**D. What should be the format for the follow-up forum or workshop on U.S. ITER Planning? Suggestions for time and topics?**