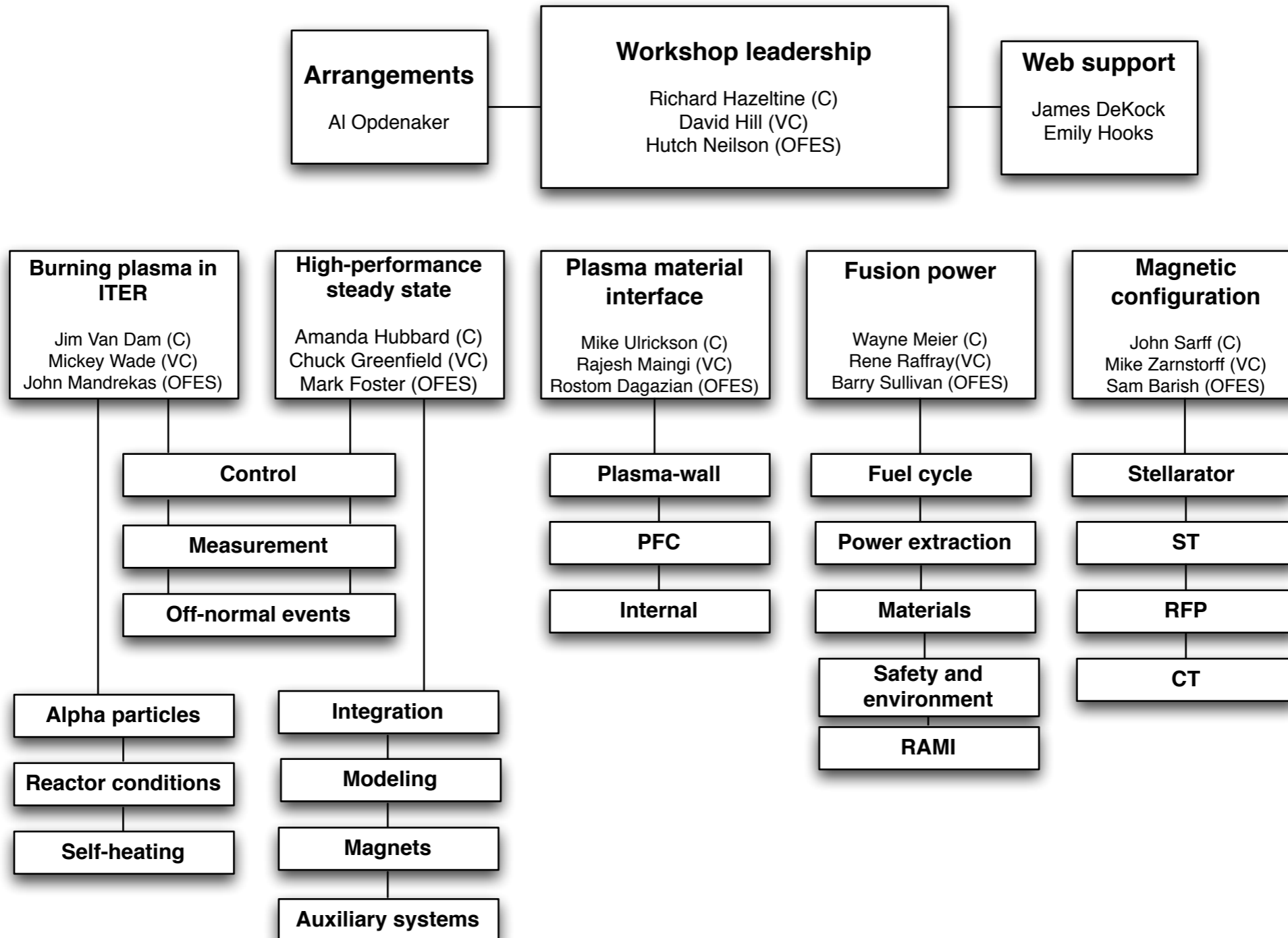


# Research Needs Workshop for Magnetic Fusion

Richard Hazeltine

# Renew structure



# Special thanks to

- Al Opdenaker (OFES)
- Emily Hooks (UTX) and Jim DeKock (UW)
- Jody Shumpert, Lee-Ann Talley and the ORISE staff
- Saralyn Stewart (UTX)

# Access to Renew web site

- Draft versions of various Renew contributions and documents are available at
  - <http://burningplasma.org/Renew.html>
  - Our Charter: “Renew Goals and Strategy”
- The public page has documents of general interest to Renew, but draft thrusts and Theme chapters are on the [private](#) (forum) page.
- Attendees who are not already registered can access the private page with help from Emily Hooks: [ehooks@mail.utexas.edu](mailto:ehooks@mail.utexas.edu)

# Renew Report

Renew is a **Workshop** that produces a **Report**. We consider first the Report.

Two intentions:

- a **foundation** for fusion program planning during the ITER era: 2010 to 2030.
- an **opportunity** for the US fusion community to display its goals and challenges to a new federal administration.

# Emphasis on action

- Issues and gaps **known** from resource documents:
  - Priorities, Gaps and Opportunities Panel
  - Toroidal Alternates Panel
  - Energy Policy Act task group of the US BPO
- What must be **done** to resolve these issues, and bring fusion energy to the power grid?
  - a portfolio of research **thrusts**.
- **Issues and gaps → Research requirements → Thrusts**

# Each Renew Thrust is

- a **building block** for detailed program plan to be constructed by OFES.
- **an organized, multi-faceted research activity**, combining new and existing program elements.
- described in about 6 pages, beginning with a **one-page** thrust summary.

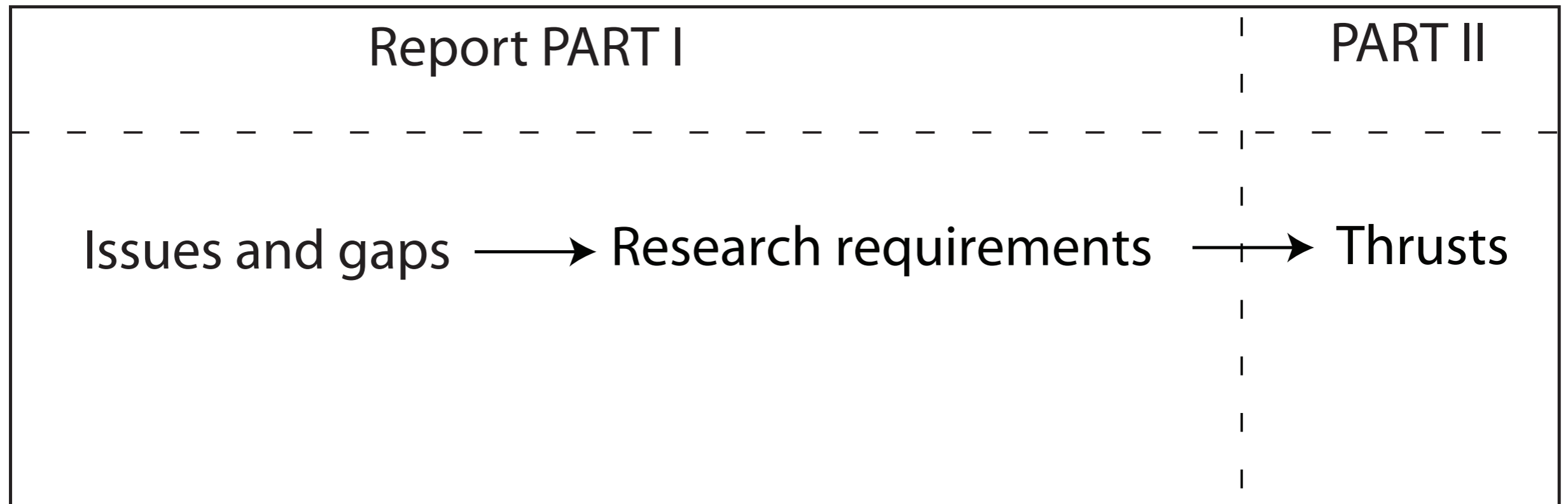
# Audiences

- OFES planners
- OMB, OSTP, SC leadership...
- Congressional staff
- Scientists in other disciplines
- Fusion community, including us

# Levels of interest

- Some will go for details (on at least selected chapters and thrusts)
  - including research requirements as well as thrusts
- Others may read selectively
  - emphasizing thrusts and Executive Summary
  - preferring **plain speech** over jargon and codewords
- All readers will demand clarity
- All will look for technical credibility

# Report structure mirrors Renew process



Workshop follows same order, but emphasizes thrusts

# The Workshop

- Input:
  - Drafts of Theme chapters, deriving research requirements from issues and gaps
  - Drafts of 18 **provisional** Thrusts
- Output:
  - the ReNeW report in essentially final form

# Agenda

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30 AM	Plenary (P): welcome and logistics	<b>P: Dr. Ed Synakowski, AD for Fusion: Context for ReNeW</b>	<b>B: Thrust focus discussion.</b> 3 parallel sessions: 4, 9, 7	P: Summary of thrust revisions	P: Wrap-up for OFES (all invited)
9:00 AM	<b>P: Dr. Dehmer: Perspectives from Office of Science</b>				
9:30 AM		Thrust 6	Thrust focus discussion: 5, 10, 13		
10:00 AM	Break	Break		Break	Break
10:30 AM	P: Theme 1 Chapter summary and discussion (20 + 10)	Thrust 7	Break	P: Begin final discussions of Thrust content	Excom meets for wrap-up
11:00 AM	P: Theme 2 Chapter summary and discussion	Thrust 8	Thrust focus discussion: 2, 11, 14		
11:30 AM	P: Theme 3 Chapter summary and discussion	Thrust 9			
12:00 PM	Break	Break	Break	Break	Adjourn
12:30 PM	Break	Break	Break	Break	
1:00 PM	P: Theme 4 Chapter summary and discussion	Thrust 10	Thrust focus discussion: 8, 1, 15	P: Continue thrust content finalization	
1:30 PM	P: Theme 5 Chapter summary and discussion	Thrust 11			
2:00 PM	Breakout (B): Theme chapter improvements	Thrust 12	Thrust focus discussion: 12, 3, 17		
2:30 PM		Thrust 13			
3:00 PM	<b>P: Thrust summary and discussion.</b> 20 + 10 for each Thrust. Thrust 1	Thrust 14	Break	P: Discuss executive summary	
3:30 PM	Break	Break	Thrust focus discussion: 16, 6, 18	Break	
4:00 PM	Thrust 2	P: Continue thrust summary and discussion. Thrust 15			
4:30 PM	Thrust 3	Thrust 16	P: thrust discussion	B: Writing chores	
5:00 PM	Thrust 4	Thrust 17			
5:30 PM	Thrust 5	Thrust 18			
6:00 PM	<b>Reception</b>	Excom meeting			

# Chits

To discuss 18 thrusts efficiently, we will use chits: short comments on a given thrust. Thrust authors will confront chits at Thrust breakout sessions.

To **submit** a chit, go to

[burningplasma.org/renewchits](http://burningplasma.org/renewchits)

[burningplasma.org/renewthemes](http://burningplasma.org/renewthemes)

and complete the form.

# Reviewing chits

- To **review** chits for a given thrust, go to the Forum (<https://burningplasma.org/forum/>), log-in, click on “DRAFT Thrust and Chits” and choose the thrust of interest.
- A summary of chits will be included in each thrust sub-forum. The summary will be updated periodically as new chits are received.

# Perspectives from the Office of Science

Dr. Patricia Dehmer

- Deputy Director for Science Programs, Office of Science DOE
- Acting Director, Office of Science, DOE