

Elements of a Faster Fusion Program
A personal perspective

Mike Dunne

- Experience with government in both the EU and US shows that the development of pre-commercial "pilot plants" (or any similar step) is best driven by establishing a clear requirement from the private sector. Only by motivating the power industry, manufacturing base, and financial market are we likely to move ahead with fusion on a reasonable timescale.

- This requires us to focus directly on the end-product of a power-producing plant, and not on the niceties of our science or technology options. We need to speak the language of our customers. Roadmaps need to speak to the external community of energy policy makers and industrial/government investors, not to the fusion cognoscenti. Internally to our community we can then translate this into what's required in terms of technology development and demonstration.

- At present, our community is suffering from the siege mentality associated with insufficient funding. This drives us to fight for parochial programs and facilities, rather than fight for a common way forward. Funding agencies will always (rightly) view such positions with great skepticism and suspicion. We need to learn lessons from the particle physics community (in terms of coordinated strategy) and the biotech community (in terms of leveraging private and public funds). If we are serious in seeing a prototype power plant (whatever acronym we choose to use), then we should commit to this being on a neutral site and stop internecine battles for local facilities.

- Our over-riding focus should be for each major area (MFE and IFE) to focus on defining the single step that will take us from our present position to one where the technical and financial risk of building a power plant is acceptable to the industrial and financial community.

- LIFE has been developed as a compelling opportunity for action along these line – see viewgraphs for details. LIFE would necessarily be located at a power-producing site, building from a coordinated program involving industry, national labs and universities across the US and beyond.