

Subject: ITER Power Claims
Date: Mon, 30 Dec 2019 09:40:02 -0800
From: Steven B. Krivit
To: a.krasilnikov, kjjung

Dear Drs. Jung and Krasilnikov,

For many years, your organizations have published false and/or misleading power claims about ITER. Perhaps such claims were published inadvertently. Yet for two years, I have explained these problems to each of you, and you have not fixed them. This raises concerns about your intent. It casts a cloud on the reputations of your organizations.

I have explained how these misleading power claims, along with similar claims from other fusion organizations, have contributed to a widespread misunderstanding of the primary design objective and mission of the ITER project. The issue can be summarized in two sentences:

1. Accurate claims about the primary design objective and mission of the ITER reactor will make clear to any reader that the power values and power balance apply strictly to the plasma.
2. It is not accurate to suggest or imply that the power values and power balance for the ITER design apply to the reactor in general.

Your European counterpart, Johannes Schwemmer, has told me that his ITER power claims are valid because he uses "an acceptable and technically correct" term. However, the terms have been technically correct only for experts who understand fusion terminology. For non-experts, the terms have been misleading. Sample evidence:

- European Commission: "By producing 500 MW of power from an input of 50 MW — a gain factor of 10 — ITER will be the steppingstone for future demonstration of the feasibility of commercial fusion power plants."
- Atkins: "ITER will produce 500 MW of power for 50 MW input."
- Nature: "[ITER] is predicted to produce about 500 megawatts of electricity."

The fact that nobody has objected to the misleading communication by you and your colleagues does not mean that it was acceptable, let alone that it was the right thing to do. Substantial corrections have been made.

Bernard Bigot has made some (but not all) corrections on the IO Web site:

<http://news.newenergytimes.net/2017/11/07/iter-organization-corrects-some-of-its-false-fusion-claims/>

<http://news.newenergytimes.net/2017/11/07/list-of-corrected-fusion-power-statements-on-the-iter-web-site/>
<http://news.newenergytimes.net/2018/04/26/iter-organization-corrects-more-of-its-false-fusion-claims/>

EUROfusion corrected all of its statements:

<http://news.newenergytimes.net/2017/11/23/eurofusion-organization-corrects-false-iter-fusion-claims/>

Your counterpart in India, Shishir P. Deshpande, corrected all his organization's statements:

<http://news.newenergytimes.net/2018/01/31/india-iter-domestic-agency-corrects-false-and-misleading-iter-claims/>

Jean-Christophe Niel, the director general of the French Institut de Radioprotection et de Sûreté Nucléaire, corrected his organization's statements:

<http://news.newenergytimes.net/2018/06/22/french-nuclear-institute-irsn-corrects-false-iter-claims/>

The UKAEA corrected its statement:

<http://news.newenergytimes.net/2018/06/26/u-k-fusion-center-corrects-false-and-misleading-iter-claims/>

FuseNet corrected its statement:

<http://news.newenergytimes.net/2019/01/30/european-fusion-education-association-corrects-false-iter-power-claim/>

You know how to communicate your claims honestly and accurately for public audiences. I invite you once again to do so.

Thank you gentlemen.

Steven

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