

# ITER: The Zero-Megawatt Nuclear Fusion Reactor

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***The International Thermonuclear Experimental Reactor, being built in France, is a zero-power reactor sold as a 500-megawatt reactor.***

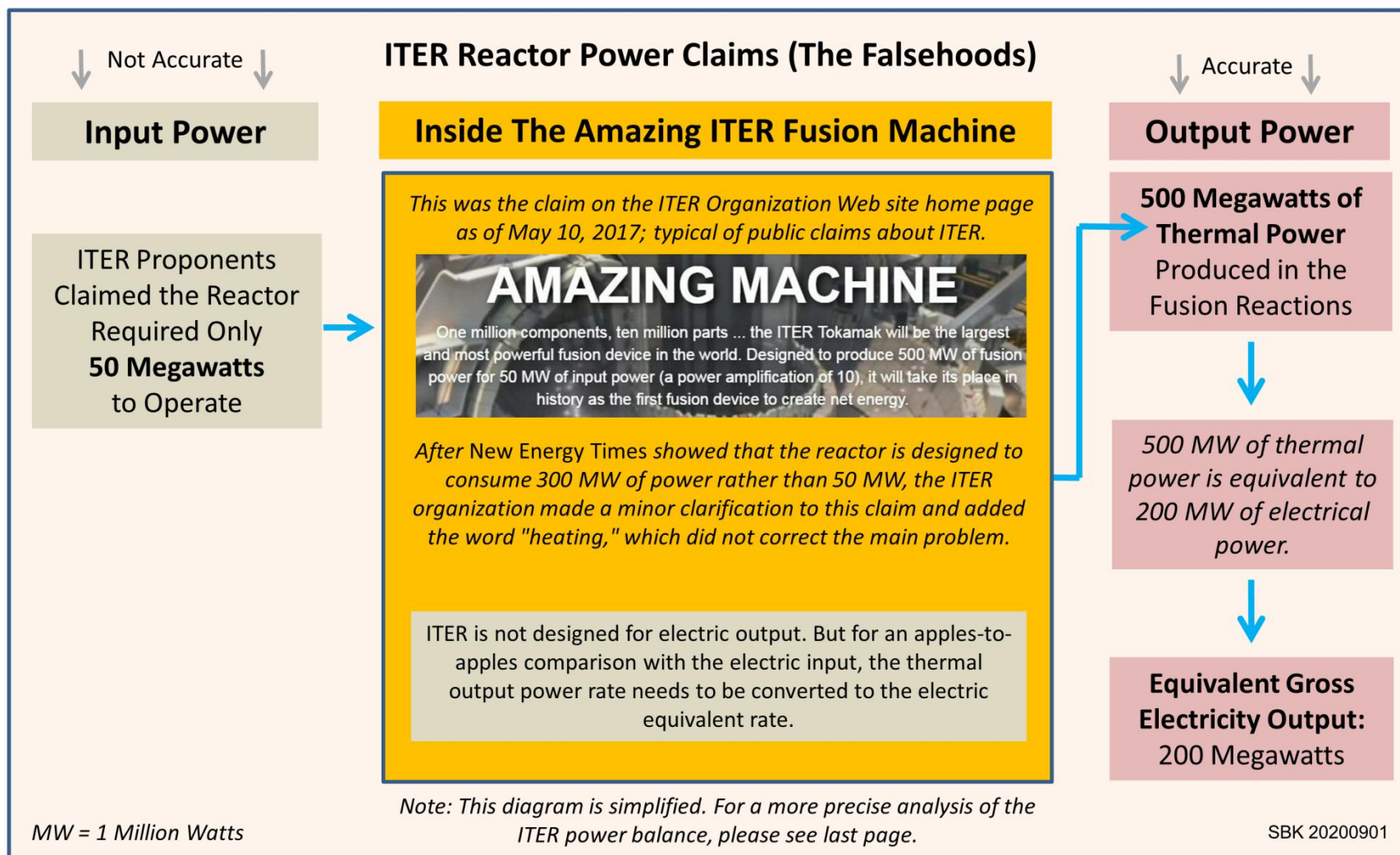
When scientists or inventors claim to have developed devices that have generated or will generate more energy than they consume, they can falsify the outcome in two ways. First, they can exaggerate the overall energy output. Second, as in the case of the ITER nuclear fusion reactor under construction in southern France, they can hide part of the power input requirement. The fusion scientists promoting ITER, at a public cost of \$25 billion to \$65 billion, have falsely stated the projected input power value. As a result of this [bait-and-switch](#) trick, they have caused nearly every person who wrote about ITER — who was not a fusion expert — to report the design and promised outcome of the reactor incorrectly. I have located [more than 200](#) such examples and explained the details of how this happened in my report "[The Dark Side of ITER](#)."

The False Promises Made By ITER Promoters	The Design Specification of ITER
The goal is to demonstrate that it is possible to produce <a href="#">commercial energy</a> from fusion.	The goal is only scientific: to produce thermal power at a rate 10 times more than the rate of thermal power used to heat the fuel.
The reactor will need input power at a rate of only 50 megawatts to operate and to produce thermal power at a rate of 500 megawatts.	The reactor will need electrical input power at a rate of 300 megawatts to operate and to produce thermal power at a rate of 500 megawatts.
ITER will generate power at a rate 10 times more than the rate at which it uses power.	ITER will produce thermal power at the same equivalent rate as the electrical power it will use. ( <a href="#">14 Sources Listed Here</a> )
The 500 megawatts of thermal power output, if connected to the electric grid, would translate to about 200 megawatts of electric power, enough for about 200,000 homes. (Sources: Princeton Plasma Physics Laboratory, <a href="#">Feb. 2012</a> ; ITER Organization press release, <a href="#">July 28, 2020</a> )	The 500 megawatts of thermal power output, if connected to the electric grid, would translate to about 200 megawatts of electric power. Subtracting the 300 megawatts of input electric power, this would not leave enough for one light bulb.

ITER is not designed to produce electricity. However, the real goal of ITER, if achieved, would be a significant scientific step forward for fusion research. But this is not what ITER promoters promised the public. Instead, they falsified and exaggerated the promised net power output by keeping the real planned input power value — 300 megawatts of electricity — well-hidden for nearly three decades.

I exposed the power discrepancies on Oct. 6, 2017. I then began contacting the heads of most major international fusion organizations because they had all used common language on their Web sites, thus publishing all the same factual discrepancies. It's been three years. All but one has [corrected their false claims](#). All have corrected some of their misleading claims; some have corrected all misleading claims. They include: EUROfusion, World Nuclear Association, European Commission, Institut de Radioprotection et de Sûreté Nucléaire, U.K. Atomic Energy Authority, International Energy Agency, European Parliament, FuseNet, Atkins, Princeton Plasma Physics Laboratory, ITER headquarters, and five of the seven ITER domestic agencies: Russian Federation, India, Korea, U.S., and Europe. (Japan and China did not appear to have false or misleading claims on their Web sites.)

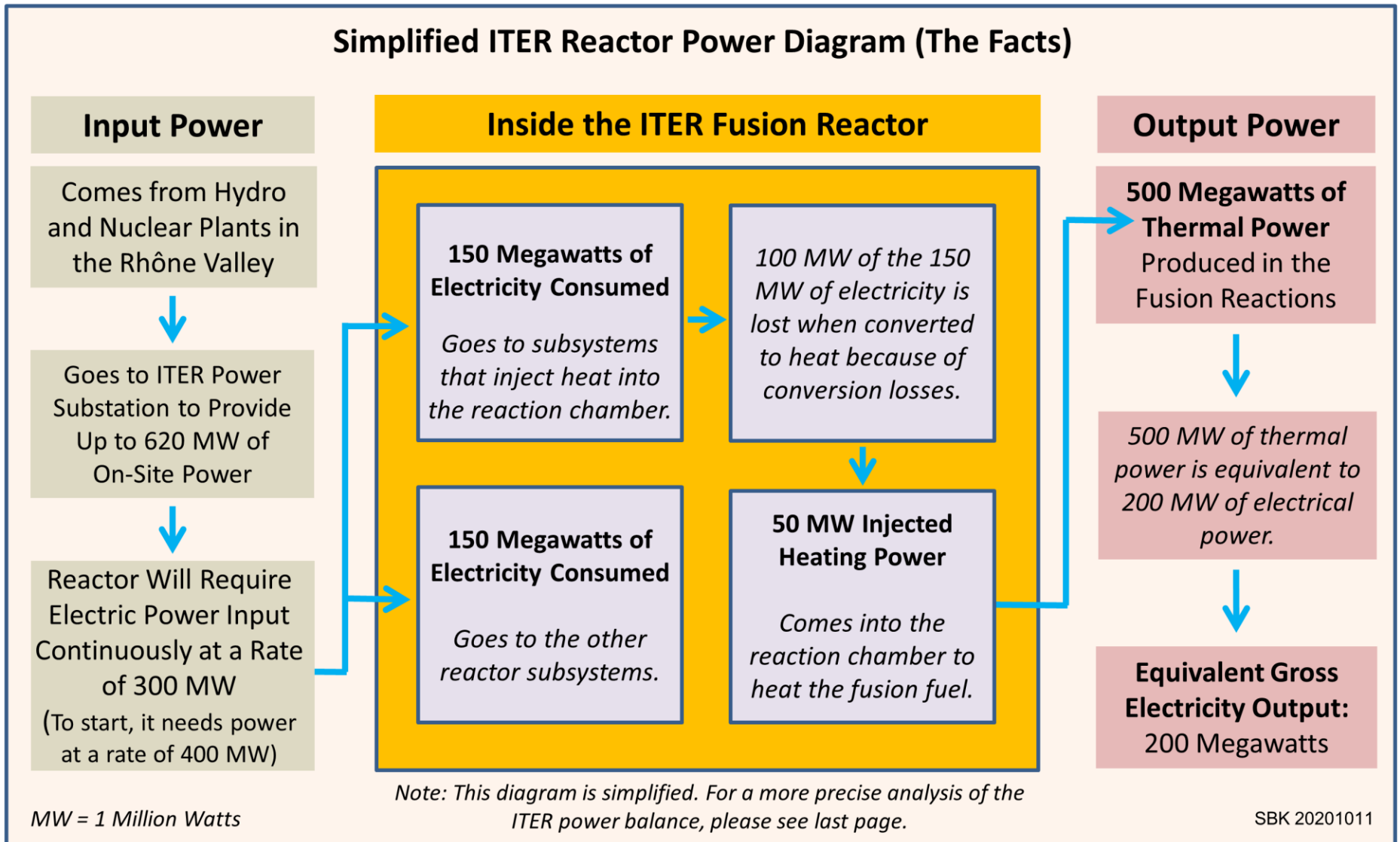
ITER promoters claimed that the reactor will produce 500 megawatts of thermal power from an input power rate of only 50 megawatts:



The deception relied partly on the phrase "fusion power," which has two meanings. The practical meaning is the potentially usable rate of power produced by a fusion power plant, after subtracting the operating power. The scientific meaning is the rate of emitted power associated with particles produced by the fusion reactions, and this meaning does not subtract the operating power. A simpler way to think about this is that the practical meaning applies to reactor power, and the scientific meaning applies to reaction power. ITER promoters place the blame for the misunderstanding on people who were not fusion experts, who did not know about the scientific meaning of "fusion power."

More than [200 examples](#) show that the ITER promoters fooled staff members of industry, government agencies, and energy organizations; editors for English, French, and Italian Wikipedia pages; scores of journalists, including those with the *New York Times*, *Science* magazine, *Nature* magazine, and *The Guardian*; university students, including those at Stanford and Princeton; and staff writers for the European Commission, European Parliament, and the White House.

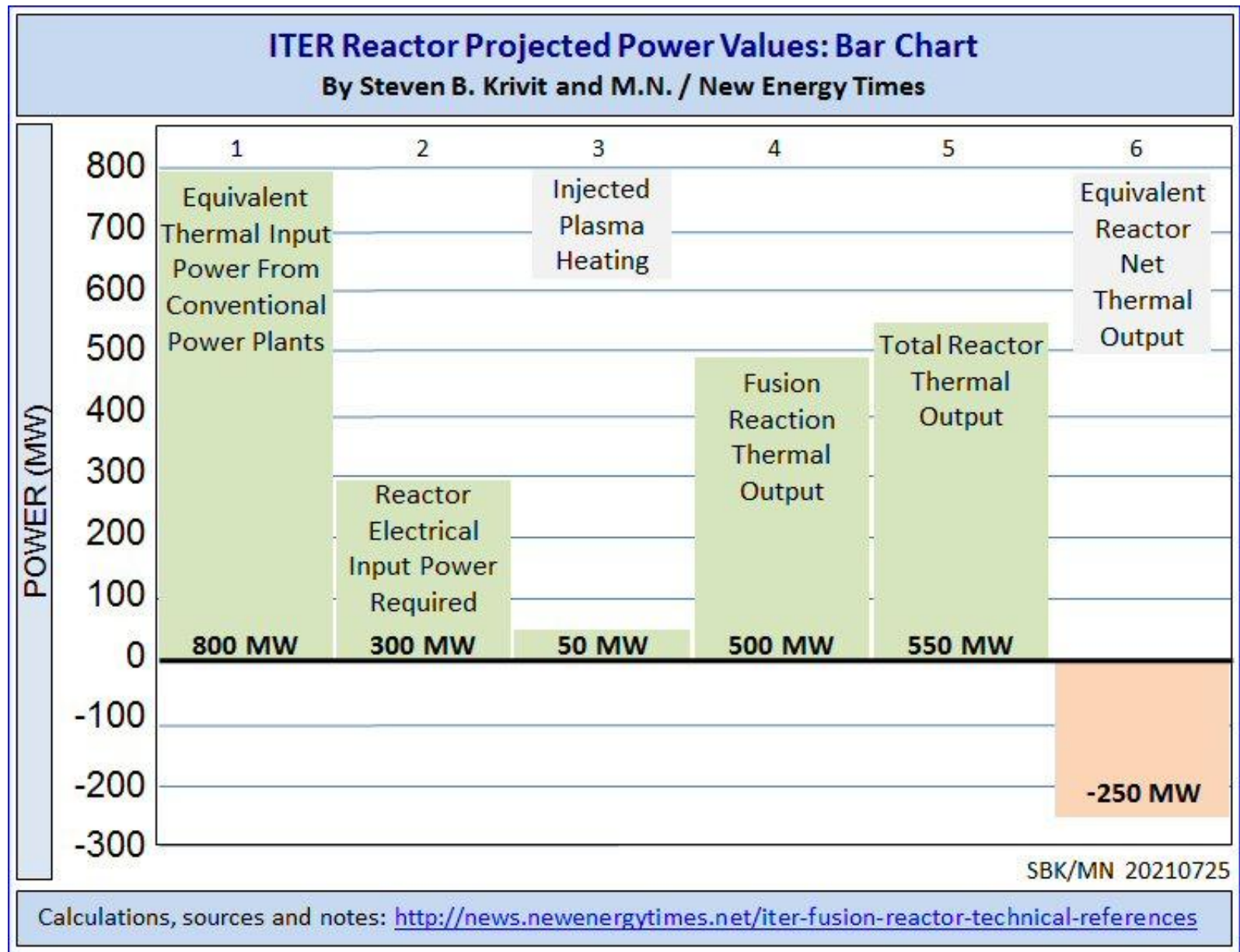
The deception relied partly on the fact that ITER promoters did not mention the rate of 300 megawatts of electricity the reactor will require:



When challenged about this omission, ITER promoters say that the total input power and total output power rates for the reactor are irrelevant. Rather, they say, the reactor is designed to create fusion reactions that produce ten times the thermal power used to heat the fuel. That's right. But they told the public for three decades that ITER would produce, for example, the equivalent of a small, commercial, electricity-producing power plant – from a rate of only 50 MW input power, as shown in [this log](#).

**The remaining pages are intended for people with expertise in nuclear fusion.**

This bar graph chart is a more detailed analysis showing the promised thermal output and net theoretical electrical output of the ITER reactor design. The next page shows the same values in a flowchart.





This flowchart represents the power flows shown on the bar chart on the previous page. It is a detailed analysis showing the projected input and output of the ITER reactor design.

