



Image from GA Website



You are invited to attend a tour of the General Atomics Magnet Technologies Center in Poway on Thursday November 12, 2015 at 4:30 PM.

The tour will spotlight GA's fabrication progress on the ITER Central Solenoid. When completed, the Central Solenoid will be the largest and most powerful superconducting magnet of its kind providing the heartbeat of ITER (pronounced "eater"), a global scientific pursuit of fusion as a new clean power source.

ITER, currently being built in France, is considered to be a necessary step in making fusion energy a practical resource for the world as part of an unprecedented scientific partnership of 35 nations. Fusion will be an enormous source of pollution-free and carbon-free energy that could last for tens of thousands of years.

For the Central Solenoid, each of the seven modules being fabricated and tested at GA is capable of storing 1GJ (280 kWh) of energy with fields up to 13T. Starting with 900m long spools of special 50mm square stainless steel/Nb<sub>3</sub>Sn conductor, the coils are wound into layers, then joined together to form a single module, 4m in diameter and 2m tall, weighing 120 tons. The coils are heat treated in a furnace at 650C prior to being insulated with fiberglass and polyamide tapes. After potting in resin, the finished coils are cooled to 4K with liquid helium and tested at full current (50kA).

An overview presentation of the ITER program, the US contribution to ITER, and General Atomics role will be given before the tour. Prior reading by the attendees on the science, technology, collaboration and logistics of ITER, and nuclear fusion will certainly help! Recommended starting points include:

[GA-ITER website](#)   [ITER website](#)   [Wikipedia: ITER](#)   [KPBS](#)

Closed toe shoes are required (no flip-flops, please). US citizens and green card holders are welcome.

**Address:** 11906 Tech Center Court, Poway

**RSVP** by 10 PM on Thursday, November 5, 2015, online at <http://goo.gl/forms/GVP8XvktQK> or email [sandiego.asme@gmail.com](mailto:sandiego.asme@gmail.com) Space is limited--first come first served. Priority will be given in the following order: 1) ASME members, 2) Guests of members, and 3) Others.

An optional dinner at a local restaurant, [Company Pub and Kitchen](#), will follow the tour. Come along and socialize with fellow engineers!