Goals:

1. By September 30 2025, make 35 kV power supply.
2. By December 1 2025, make a nuclear fusion capable fusor with 35 kV power supply.
3. By December 1 2026, make a 2-button nuclear fusion capable fusor that is as smart as possible.

Engineering Todo:

* **(9/30/25)** 35 kV Power Delivery System
  + Feedthrough
  + Power Cables
  + **(8/7/25)** VARIAC
    - Mechanical stepper motor-VARIAC connector, with fan mount
    - **(7/15)** Raspberry Pi remote motor driver via SSH, Python app
      * PuTTY setup
      * RPi to motor driver to stepper wiring
  + AC-DC & SMPS
    - 120V rectifier to BOM
    - Find smoothing capacitor value
  + Transformer:
    - Calculate primary coil turns for 30kHz switcher.
  + Design Voltage Multiplier
    - Where to source 35kV rated caps?
  + Dielectric oil
* 0.1 mT Vacuum & Pressure Systems
  + Vacuum Chamber
  + Turbomolecular pump
* Neutron Detection Systems
* Control Systems:
  + **(8/1/25)** State machine for startup & shutdown of fusor
* Radiation Mitigation
* Deuterium Supply
* Documentation/ Presentation