



Fuel Development Laboratories

CNL's Fuel Development Laboratories (FDL) plays an integral part in the development of future opportunities for reactor design in the nuclear industry. It is here that new fuel concepts are tested.

The FDL utilizes the infrastructure at CNL's Chalk River Laboratories (CRL) for out-reactor and in-reactor testing, and the development and fabrication of fuel and fuel components. The FDL has the unique resources to work alongside other on-site services at CNL, such as fabrication facilities, engineering services and analytical sciences. It carries out fuel research and development and provides the science and technology necessary to develop new fuels.

The extensive technical expertise and fabrication facilities at CRL allow relatively large-scale fabrication and testing of fuel under a variety of simulated reactor conditions. The laboratories are used to test new fuel concepts for existing or future nuclear reactors including Research Reactor Fuel and Power Reactor Fuel. The activities in the FDL include:

- Development of the S&T to fabricate new fuel
- Fabrication of prototype and experimental fuel
- Out-reactor fuel testing and fuel materials properties measurements
- In-reactor testing in the NRU research reactor under prototypical power reactor conditions, and
- Fuel fabrication for physics testing in the zero-energy ZED-2 research reactor

The Fuel Development Laboratories are dedicated to the creation and experimental manufacture of nuclear fuel to:

- Increase energy efficiency
- Increase safety and reliability
- Create non-proliferation fuel
- Develop energy sustainability technologies
- Decrease environmental impact

The Fuel Development Laboratories would welcome industry or academic partnerships.

