

and used to produce alternative products such as thermal, electrical, or chemical energy, depending on the required time and power demand.

On the use side, flexible demand response approaches may be employed to shift demand when possible, thereby reducing peaks, slowing ramp rates, and limiting stress on the grid.

Other key insights include:

- There is already an established body of knowledge surrounding flexible operation of existing nuclear plants.
- Many organizations are researching how nuclear reactors can increase the speed with which they change their electrical output and diversify their energy products.
- Advanced reactors will present even more

opportunities for flexibility in nuclear systems.

- Nuclear energy has the potential to couple with many other energy sources in a synergistic fashion.

The CEM is a high-level global forum created to promote clean energy technology, share lessons learned and best practices, and encourage the transition to a global clean energy economy. Its co-lead countries are represented by the U.S. Department of Energy; Natural Resources Canada; Ministry of Economy, Trade, and Industry of Japan; and the Department of Business, Energy, and Industrial Strategy of the United Kingdom. The report can be found at nice-future.org/flexible-nuclear-energy-clean-energy-systems. ☒

Ph.D. FELLOWSHIP OPPORTUNITIES





ELIGIBILITY: U.S. CITIZENS WHO ARE SENIOR UNDERGRADUATES OR STUDENTS IN THEIR FIRST OR SECOND YEAR OF GRADUATE STUDY.

The Department of Energy National Nuclear Security Administration Stewardship Science Graduate Fellowship (**DOE NNSA SSGF**) provides outstanding benefits and opportunities to students pursuing degrees in stewardship science areas, such as **properties of materials under extreme conditions and hydrodynamics, nuclear science, or high energy density physics.**

The fellowship includes a 12-week research practicum at Lawrence Livermore National Laboratory, Los Alamos National Laboratory or Sandia National Laboratories.

APPLICATIONS DUE 1.6.2021
www.krellinst.org/ssgf



ELIGIBILITY: U.S. CITIZENS WHO ARE ENTERING THEIR SECOND (OR LATER) YEAR OF GRADUATE STUDY.

The Department of Energy National Nuclear Security Administration Laboratory Residency Graduate Fellowship (**DOE NNSA LRGF**) gives students the opportunity to work at DOE NNSA facilities while pursuing degrees in fields relevant to nuclear stockpile stewardship: **engineering and applied sciences, physics, materials, or mathematics and computational science.**

Fellowships include at least two 12-week research residencies at Lawrence Livermore, Los Alamos or Sandia national laboratories, or the Nevada National Security Site.

APPLICATIONS DUE 3.17.2021
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These equal opportunity programs are open to all qualified persons without regard to race, gender, religion, age, physical disability or national origin.



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