Universität Stuttgart
Institut für Kernenergetik
und Energiesysteme

Funding „Landscape“ of the Nuclear Field in Germany

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IKE

INEAS National Preliminary Survey

IAEA
International Atomic Energy Agency

Bucharest, Romania,18 – 21 November 2025

Federal Government Energy Strategy in Germany

7th Energy Research Programme

- Issued 2018 by the Federal Government (highest ranking political document)

8th Energy Research Programme

- Drafted, not issued. (Focus on fusion, not fission)

Nuclear Topics:

4.5: Nuclear Safety Research

- 4.5.1: Reactor Safety Research
- 4.5.2: Waste Management and Repository Research
- 4.5.3: Radiation research

6.4 International cooperation in nuclear safety research

Funding „Landscape“ in Germany (improved)

7th Energy Research Programme

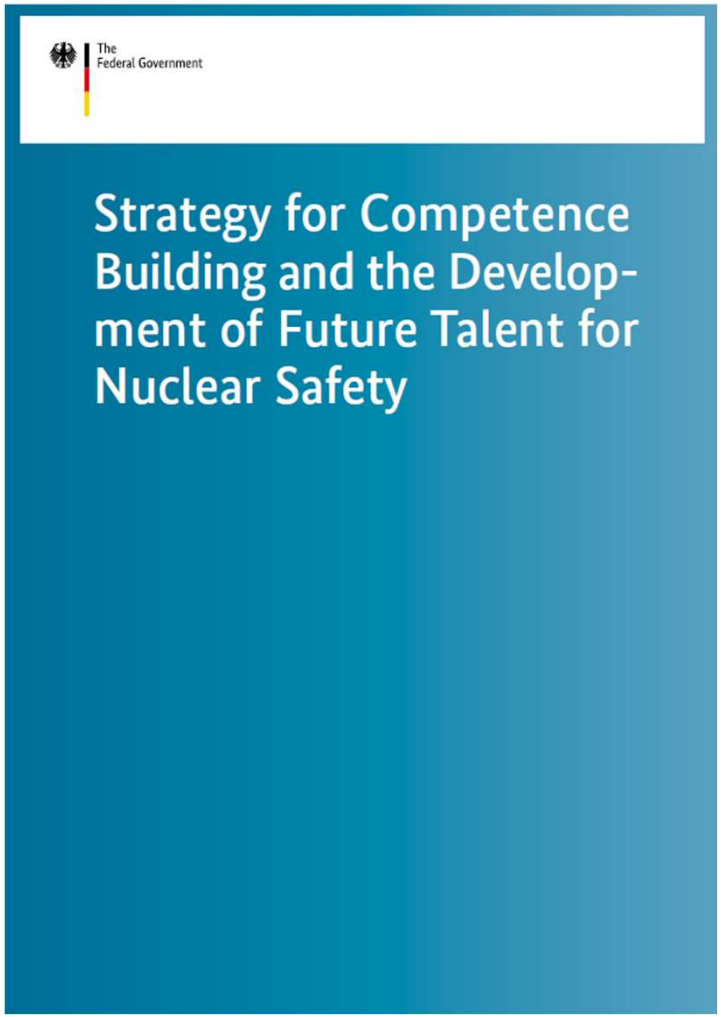
Federführung: BMWi

Federal Ministry of Research, Technology and Space	Federal Ministry for the Environment, Climate Action, Nature Conservation and Reactor Safety	
(Application-oriented) basic research	Application-oriented basic research	Task-related research and development
Institutionelle Förderung Helmholtz-Gemeinschaft Deutscher Forschungszentren **HGF**	Projektförderung Reaktorsicherheits- und nukleare Entsorgungsforschung, Nachwuchsförderung **Universitäten** **Forschungs-organisationen** z. B. GRS	Vorhabenträger Bundesgesellschaft für Endlagerung mbH **BGE** BGZ Gesellschaft für Zwischenlagerung mbH **BGZ**
Rückbau und Nachwuchsförderung nukleare Sicherheit **Universitäten, Forschungsorganisationen und Industrie**	Ressortforschung Bundesanstalt für Geowissenschaften und Rohstoffe **BGR** Bundesanstalt für Materialforschung und -prüfung **BAM**	Aufsicht und Genehmigung Bundesamt für die Sicherheit der nuklearen Entsorgung **BASE**

Federal Government Strategy (issued 2020)

Content:

- Needs and Objectives
- Status Quo / Activities so far
- Areas for action
  - **Education and Teaching**
  - Advanced and Continuing Training
  - Research and Development
  - Knowledge retention, committee works, networking
  - International networking, cross border activities
  - Career prospects and recognition of society
- Assessment and Outlook
- Implementation and Evaluation



Recommendations for the education and teaching area of action (shortened)

1. Maintain and develop […] appropriate ***scientific and technical infrastructures*** at HEIs and research facilities.
2. Maintain and develop […] appropriate ***study courses*** at universities […].
3. Maintain and develop […] systems to adequately promote ***research projects at universities*** to attract young scientists through involvement in ***attractive research work*** in the field of nuclear safety.
4. Incorporate ***specialized topics of nuclear safety into degree programmes*** for STEM, medicine, architecture, civil engineering or environmental engineering […]
5. ***Strengthen alliances*** between HEIs and operators, businesses, research institutes, licensing and regulatory authorities by mentoring and supporting, e.g. dissertations, internships and research or teaching projects […]
6. Develop and expand ***cooperation with local chambers of commerce and industry*** […], incorporate specialized topics of ***nuclear safety into existing*** *[vocational]* ***training programmes*** that touch on these topics
7. Internationalize study programmes, ***promote international exchange and collaboration*** with universities, research centres and businesses outside Germany.
8. ***Continuously examine*** the extent to which demand can be met by the current E&T infrastructure.

Programmes of Federal Ministries (here BMWi)

- ***Which topics*** will be funded?
- Research focus (translated)
  - A: Reactor Safety
    - A1: Safety of components and structures
    - A2: Transients and accidents
    - A3: Human-machine interaction
  - B: Interim Storage …
  - C: Final Disposal …
  - D: Cross-cutting activities
    - D1: Knowledge and competence management
    - D2: Socio-technical issues
    - D3: International collaboration / Safeguards

Programmes of Federal Ministries (here BMFTR)

- ***Funding instruments*** (how?)
- Publications in the „Bundesanzeiger“ (platform for public announcements, e.g. call for tenders)
- ***Research projects:***
  - Duration: 3 years
  - Doctoral Cand.+ researchers (students to be incl.)
  - Experimental equipment and consumables
- ***Research groups:***
  - Duration: 2 + 2 years (evaluation in between)
  - 1 group leader + 3 Doctoral Candidates + students + experimental equipment
- ***Post-Doctoral programme (new):***
  - Duration: 2 years (max)
  - 1 Post-Doc + students (+ limited equip. / consumables)

Bundesanzeiger
Herausgegeben vom Bundesministerium der Justiz
www.bundesanzeiger.de

Bekanntmachung
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Bundesministerium für Bildung und Forschung

Richtlinie zur Förderung von Zuwendungen im Rahmen des 7. Energieforschungsprogramms der Bundesregierung in der nuklearen Sicherheitsforschung und der Strahlenforschung

Vom 9. Januar 2024

1 Förderziel, Zuwendungszweck, Rechtsgrundlage

1.1 Förderziel

Das 7. Energieforschungsprogramm „Innovationen für die Energiewende“ der Bundesregierung (https://www.bmwi.de/Redaktion/DE/Publikationen/Energie/7-energieforschungsprogramm-der-bundesregierung.html) bildet den Rahmen für die Forschungsförderung und Innovationspolitik im Energiebereich. Als strategisches Element der Energiepolitik ist das Programm an den Zielen der Energiewende ausgerichtet.

Personal experiences to share

Situation regarding Students (personal experience)

- There are much less STEM students at Universities. Lack to **attract** students!
- Out of this low total number, only a few students select Nuclear Topics
  - „There is no future in industry. I do not see jobs!“
  - Where is the “light tower project”?

- Industry is **barely visible** in schools and at universities. -> They should develop more efforts **attracting** their future workers and employees **(new role)!**
- For my projects, I try to include right from the beginning into our PhD topics. I try to organize internships at partner industries**. Coordinated approach highly recommended**.

Situation regarding Students (personal experience)

- Drain of people after finishing M.Sc. **retaining** of people in the nuclear sector because of attractive working environment outside the nuclear field.
- We have transitioned from an employer's market (dozens of students apply for one position) to an employee's market (lots of institutions fight for one graruate).
- Approach: Early contact with industry.
  - Mentorship of “high potentials” (grade 9.5 to 10) “Germany stipendium” 300 € per month, obligation to work for this company after graduation for 2 years+)
  - Can also be given by TSO, governmental authorities, etc.
  - Observation: local companies close to the university are more interested. No need for students of leaving the local area (social contacts) after graduation
- Obstacle: convince HR that they should “invest” into their future employees.

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Vielen Dank! Thank you! Mulțumesc mult!

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