



Preparation of licensing process for large NPPs & SMRs

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Introduction

ANVS and new nuclear ambitions in the Netherlands



Legal Competences ANVS

- > Authorization (a/o Licensing)
- > Oversight and enforcement
- > International cooperation
- > Public communication
- > Conduct&commission research
- > Advising on policy, legislation and regulations
- > Role in crisis preparedness and response
- > Supporting government organizations with expertise





Growing government ambition for nuclear

- > 2020: 100% public investment for new RR PALLAS
- > 2021: LTO of NPP beyond 60y, prepare 2 large new NPPs
- > 2022&23: investment in nuclear knowledge infrastructure
- > 2024: SMR support program
- 2024 agreement of government under construction: +2 large NPPs, +option for SMRs



Organizational Readiness

Capacity and competence development



Capacity (fte) at ANVS 180 160 140 120 100 80 60 40 20

ANVS June 3, 2024

Capacity & competence building

- Pro-active monitoring of developments and identification of future needs
- Recruitment and training (ANVS Academy, traineeship)
- Internal program 'New Nuclear Initiatives' for integral approach to organizational readiness, prioritization and dynamic decision making
- International regulatory
 collaboration bilateral (AU, BE, CA,
 DU, FR, KR, PL, UK, US, ZA) and
 multilateral (IAEA, WENRA,
 ENSREG, OECD NEA)



Workforce and Gender, Diversity and Inclusion

- Chair Board ANVS is Co-chair
 International Gender Champions Group
- In context of Dutch Feminist foreign policy; spread the message around the world but also bring it back home
- > Examples at ANVS:
 - Bias training team leads for recruitment
 - ANVS working group
 - Rainbow network
 - Put topic on agenda in (national) nuclear sector

Training on the job (1/2) Licensing PALLAS

- Start pre-license interactionJune 2015
- Submission (incomplete) PSAR March 2021
- License applicationJune 2022
- License to construct granted March 2023



Photo: NRG|Pallas

Training on the job (2/2): international activities

- Interaction with 3 vendors of large NPPs in the technical feasibility study via EZK
- Observer in GDA phase 2 by ONR for Rolls Royce SMR
- > Phase 2 of Joint Early Review of Nuward SMR (with regulators from FR, FI, CZ, SE, PL)
- Interaction with Thorizon (collaboration with ASN)



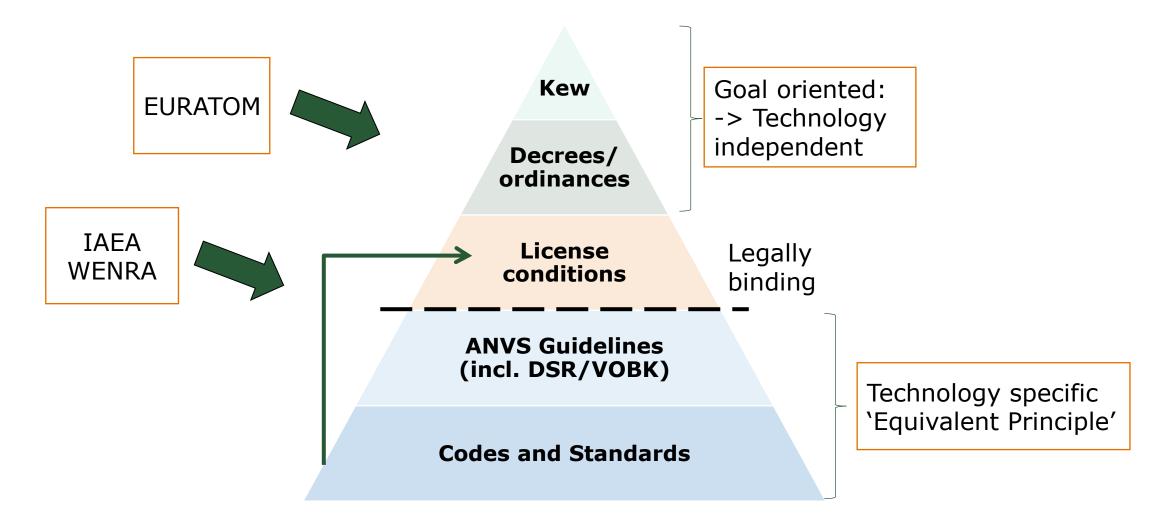


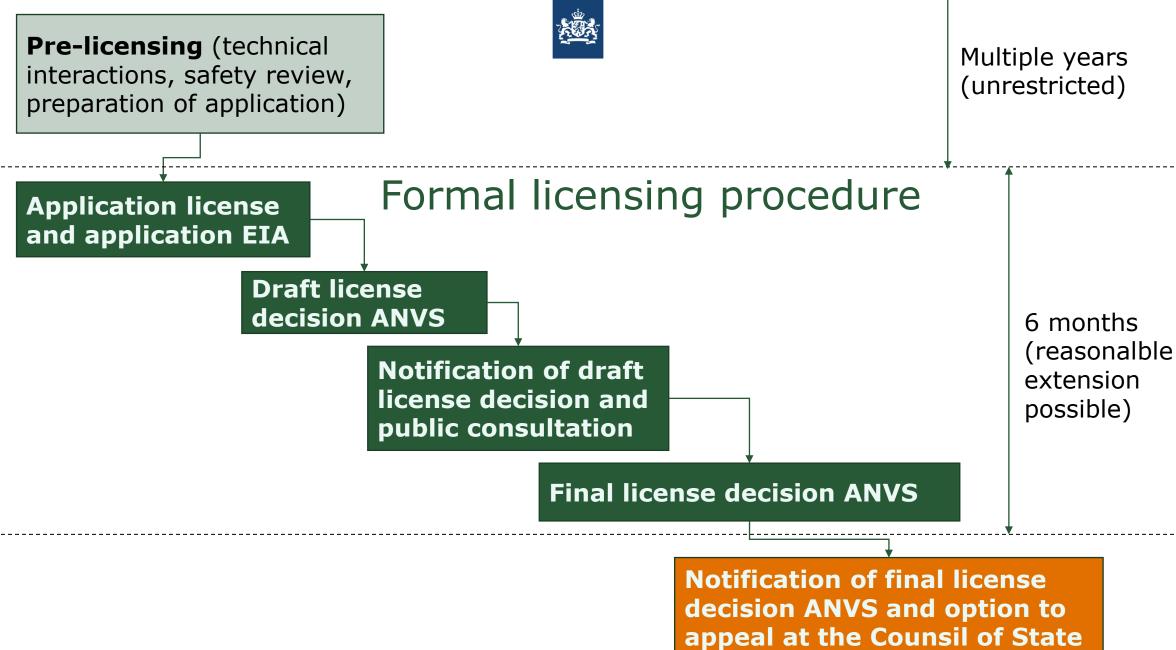
(Pre)licensing in the Netherlands

National and European



Dutch regulatory framework: fit for future







ANVS engagement from start to construction license

- > Orientation phase: exchange information
 - Build-up of knowledgeable organization and budget
 - Choice of location, start of IEA procedure
 - Basic design / tender with clear design specifications
- > Pre-licensing phase: technical review and assessments
 - Positive ANVS review (scope, level of detail, correctness) of <u>safety</u> (PSAR) and <u>environmental impact</u> information
 - Admissible license application including EIA and safety report
- > Formal license application procedure: decision after consultation
 - Review of organization readiness, approved decommissioning & security plans



Current engagement in NL

- Explain the Dutch licensing process to potential applicants
- Clarify Dutch requirements and guidelines to applicants and vendors
- Inform involved parties on relevant safety aspects
 - Example: published ANVS viewpoints on relevant location aspects as part of the strategic environmental impact assessment procedure



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Ons kenmerk ANVS-2024/1626

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Betreft Reactie relevante aspecten locatie nieuwe kerncentrales

Geachte heer

Op 23 februari JI. is door het Ministerie van Economische zaken en Klimaat het voornemen en voorstel voor participatie voor de bouw van twee nieuwe kerncentrales gepubliceerd. In dit voornemen nodigt u burgers, bedrijven, maatschappelijke organisaties en bestuursorganen uit om mee te denken. De Autoriteit Nucleaire Veiltigheid en Stralingsbescherming (ANVS) informeert u naar aanleiding van deze uitnodiging vanuit haar eigen kennis en expertise over omgevingsaspecten die van belang zullen zijn bij een toekomstige vergunningprocedure. De ANVS voert over de verwachtingen in een toekomstig vergunningtraject ook al oriënterend overleg.

Rol en verantwoordelijkheid ANVS

Uw gepubliceerde voormemen vormt de eerste stap in de ruimtelijke procedure voor de bouw van twee nieuwe kerncentrales. Voor deze nieuwe kerncentrales zal een vergunning op grond van de Kernenergiewet bij de ANVS moeten worden aangevraagd.

De ANVS gaat niet over de locatiekeuze voor een nieuwe kerncentrale, deze keuze is aan de initiatiernemer, maar de ANVS zal bij de vergunningaanvraag wel beoordelen of de locatie geschikt is om veilig de aangevraagde nucleaire installatie te kunnen bouwen.

In het licht van die beoordeling is het van belang om tijdens het proces van locatiekeuze al bepaalde aspecten te beschouwen. De ANVS geeft in deze reactie graag duidelijkheid over welke concrete aspecten dit zijn.

Relevante aspecten van een locatie

De voor de ANVS relevante aspecten bij het toetsen van de geschiktheid van een locatie voor een nieuwe nucleaire installatie zijn op te splitsen in twee soorten aspecten. Omgevingsaspecten die het risico voor de installatie kunnen beïnvloeden en aspecten die bepalen welk risico de installatie met zich meebrengt voor de omgeving.

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(Pre)licensing in Europe

Lessons of ENSREG in the European SMR pre-Partnership



What is key for pre-licensing of SMRs in Europe (1/2)

Licensing process / safety requirements

Licensing process

Quite similar in Europe

Authorisation remains the sovereign responsibility of states



Cannot lead to international certification or reciprocal recognition of the authorisations issued by the safety authorities

Safety requirements

Established in different frameworks (IAEA, WENRA)

Built on the experience of what is already implemented



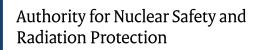
Rather how to demonstrate compliance with the requirements that needs to be worked on





What is key for pre-licensing of SMRs in Europe (2/2)

- > Engage **early dialogue** between designers/licensees and regulators on main elements of the design options
- > Promote cooperation of "interested" regulators to carry out a joint safety pre-assessment on a mature design and its dissemination with other regulators confronted with that design at a later stage.
- Identify in an early phase potential blocking points in the safety requirements or licensing processes and arrangements for convergence





Conclusion

- ANVS has experience and is further building its competence and capacity in preparation for new nuclear initiatives in NL
- > Early engagement is important
- International collaboration of ANVS with regulators that are reviewing/have reviewed the specific design in the pre-licensing phase is crucial



