

Fermi HR Development Strategy

Eva Simonsen (PhD)
Senior Human and
Organisational Factors
Specialist, Vattenfall

Working Group



Eva Simonsen, PhD

*Senior Human and
Organisational Factors
Specialist*



Anders Ivarsson

*Senior Human and
Organisational Factors
Specialist*



Claes Andersson

Senior Licensing Specialist

Prerequisites

**Reference
technology for
the study:
GE Hitachi
BWRX-300**

**One 300 MWe
unit**

**Possible
addition of
another 300
MWe unit after
completion of
first unit**

Limitations

- *Analysis scope*: the competences needed to start up and implement a nuclear programme up until and including the point where safe and stable operation has been reached.
- Staff of subcontractors and actors further down the supply chain are not included in the analysis.
- The HR development strategy is based on available knowledge at this point in time, further iteration will be needed.



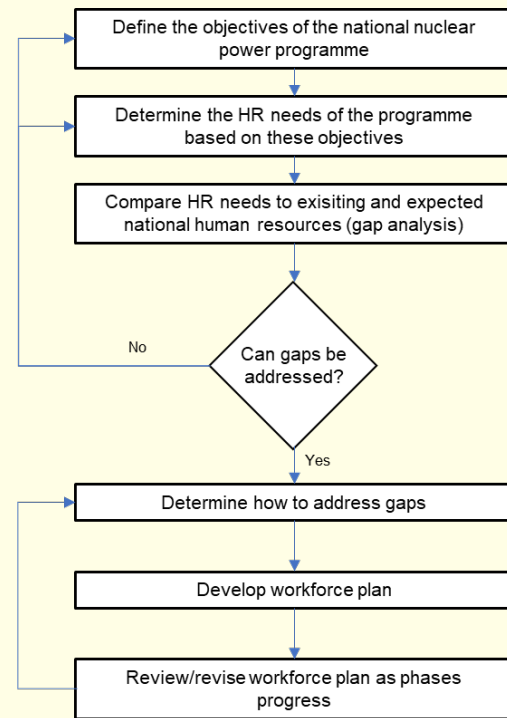
Method

Input & Guidelines

- IAEA Guidelines
- Staffing proposal from vendor of reference technology
- Analysis by VTT (2019)

Method

- IAEA Milestones approach
- IAEA Workforce Planning Process

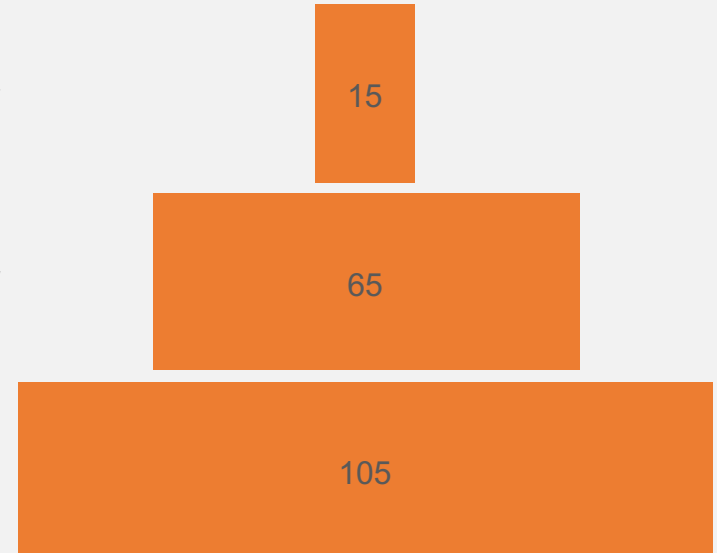
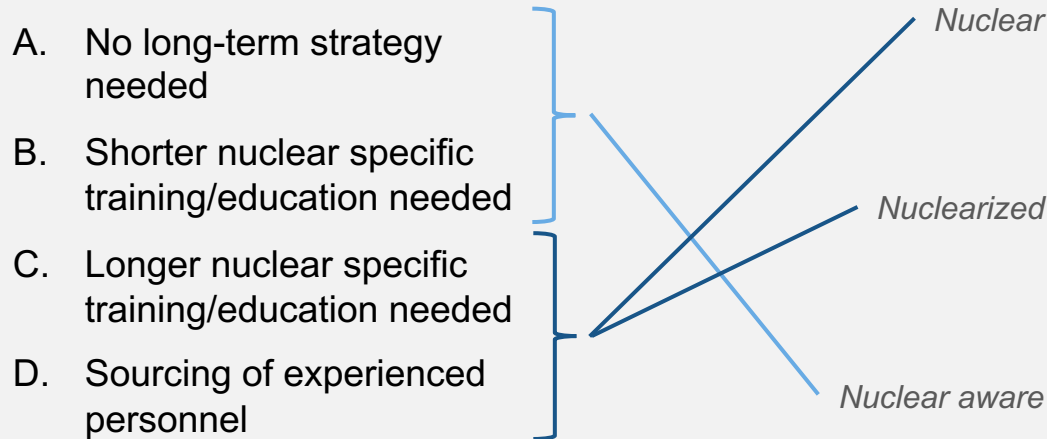


Workforce Planning Process by IAEA

Competence Areas

- Chemistry
- Decommissioning
- Document control and records
- Emergency preparedness
- Engineering - Construction
- Engineering - Electric power
- Engineering - I&C
- Engineering - Mechanical
- Engineering - Nuclear physics
- Engineering - Process
- Engineering - Safety analysis
- Export control
- Fire safety
- Funding and financing
- General management
- Geology
- Human factors
- Human resources
- Industrial safety
- IT security
- Legal
- Licensing & Regulatory affairs
- Logistics
- Maintenance - Operative
- Nuclear fuel cycle
- Operating experience feedback
- Plant operation
- Project Management (Construction Oversight)
- Public affairs/Communications
- Purchasing & contracts
- Quality management
- Radiation protection
- Radioactive waste - Operative
- Radioactive waste - Strategic
- Regulatory framework preparation
- Safeguards
- Security and physical protection - Operative
- Security and physical protection - Strategic
- Site and supporting facilities
- Training

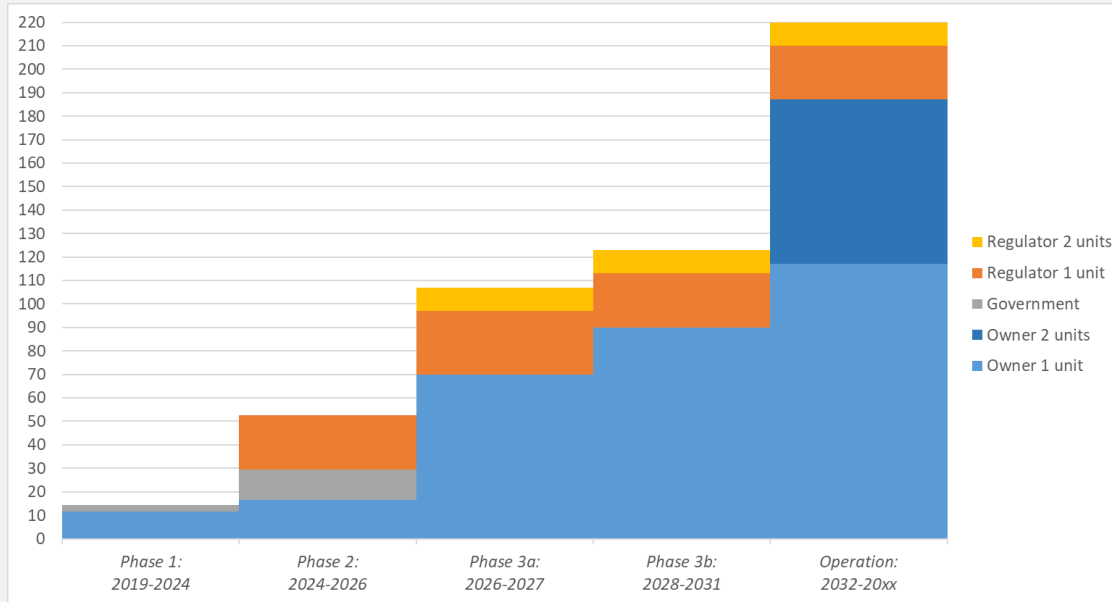
Sourcing strategies



Estimated FTEs for one unit

Workforce Plan

Estimated number of FTE:s per phase



Staffing ramps up in different phases for different actors



Owner staffing lower for SMR than traditional plant

Enhanced operating organisation initially

Summary

- Competence areas needed identified
 - High-level sourcing strategies identified
 - Number of FTE:s estimated
-
- ➔ Need for highly specialized nuclear knowledge limited
 - ➔ Existing competence in Estonia can be utilized to a high degree



VATTENFALL

