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INPRO

Environment sustainability

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Basic info of Slovenia

- Nuclear country, operating one unit of PWR
- NPP Krško (slo. NEK), Westinghouse, 700MW net
- One research reactor Triga in Ljubljana
- In the decision making process for new unit of NPP; at existing NPP site
- Confirmed investment program for low and intermediate level radioactive waste facility (NSRAO); close to NPP site
- Country power statistics: , 3400MW installed, 15TWh production (3TWh of Croatia), 12,5TWh consumption
- New unit of NPP: from 1000MW up to 1700MW

Our view of Sustainability

Assessment Purpose

- Identification of society needs (energy, GDP, prosperity,...)
- Identification of possible scenarios/solutions how to achieve the identified needs
- Assessment of identified scenarios in the view of sustainability, with site specific properties and limitations
- Comparison of assessed scenarios/solutions in the view of sustainability and other decision making factors
- The accepted solution, which satisfies our needs with as low possible impacts to the environment (regional and global) and mankind

INPRO methodology

- Sustainability Assessment dependent on project maturity
- For countries like Slovenia (utilization of small scale) global perspective is beyond reasonable assessment
- Assessment based on comparison of mature INS with other technology solution is desirable
- Assessment between INS and CNS is important for big players, which have global effect
- Proposal for INPRO – as it would be very beneficial for countries like Slovenia: to assess the scenarios of energy perspectives made by international important organization (NEA, IEA, EU,...)

Possible obstacles

- Chapter 3.2.1.2 - site characteristics
 - Appropriate level of sustainability can not be address if site is not specific/maturity depended assessment...are results usable for wider public debate?
 - Even if INS as a object is sustainable or is more sustainable in comparison with CNS (current nuclear system) it may not be sustainable on specific site... sustainability is therefor site specific
- Sustainability comparison between INS and CNS is not as reasonable than comparison of INS to other technology for energy production (not nuclear) could be;
- Assessors/users impact to assessment (due to the quality of available data/maturity of INS)

Comparison of different INS

Possible problems:

- Do we want to address the request of NGOs that best INS is applied – do we want to compare different INS; let's say NPPs of different vendors; although they all meet the standards' requirements
- Comparison of INS can made issue for a selection of better INS; but is it real better or are compared stressors not appropriate (due to the different INS maturity); or even assessment methodology
- Final decision shall be made by investor if all standards' requirements are met and not third party

Resource sustainability

- For each INS facility's sustainability assessment: resource availability versus global demand foreseen by international organizations (IEA) should be made;
 - Resource demand of one INS is not a problem and also can not appropriate be evaluated in respect to global resources as global demand for these resources is not established/assessed (IEA energy perspective)... factor $D_{j,g}$ (long term perspective of global demand)
- Proposed criteria requirement:
 - Other primary sources saved by implementation of INS (fossil and other non renewable resources)

Thank you for your attention!

Questions?

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