

Nuclear Innovation Cooperation

In the Low-Carbon Perspective

NEA NI2050 Initiative

*Brainstorming and elements of ToRs
for Roadmapping and Adv Panel*

NI2050 Advisory Panel October 2015

TASK:

***Clarify the **Objectives**,
the (technical and timeline) **Scope**,
the **Methodology** and
the (organisational) **Process*****

***of the (top-down) Roadmapping of fission RD&D priorities
(leading to innovation)***

OBJECTIVES of the Roadmapping of RD&D priorities

(Nuclear) Energy Sustainability goal: nuclear in support of sustainable development but also sustainability of the nuclear sector

Timeline and Assumption: 2050 targets ETP 2DS (930 Mwe), and beyond

Level of detail: global and high level, realise the workload over 1,5 years, can be a first phase but need concrete outcomes, might be extended with more details later

Use of existing roadmaps: may require compatibility

Compatibility with Survey: to define gaps

Reach concrete outcomes: consensus on main priorities/gaps for message to MC authorities and leading to a few possible cases for cooperation in the coming years

SCOPE (technical) of the Roadmapping:

Full coverage associated with sustainability and timeline:

2015-2050-2100+: LTO, new built, burners/breeders, HLW, new energy system

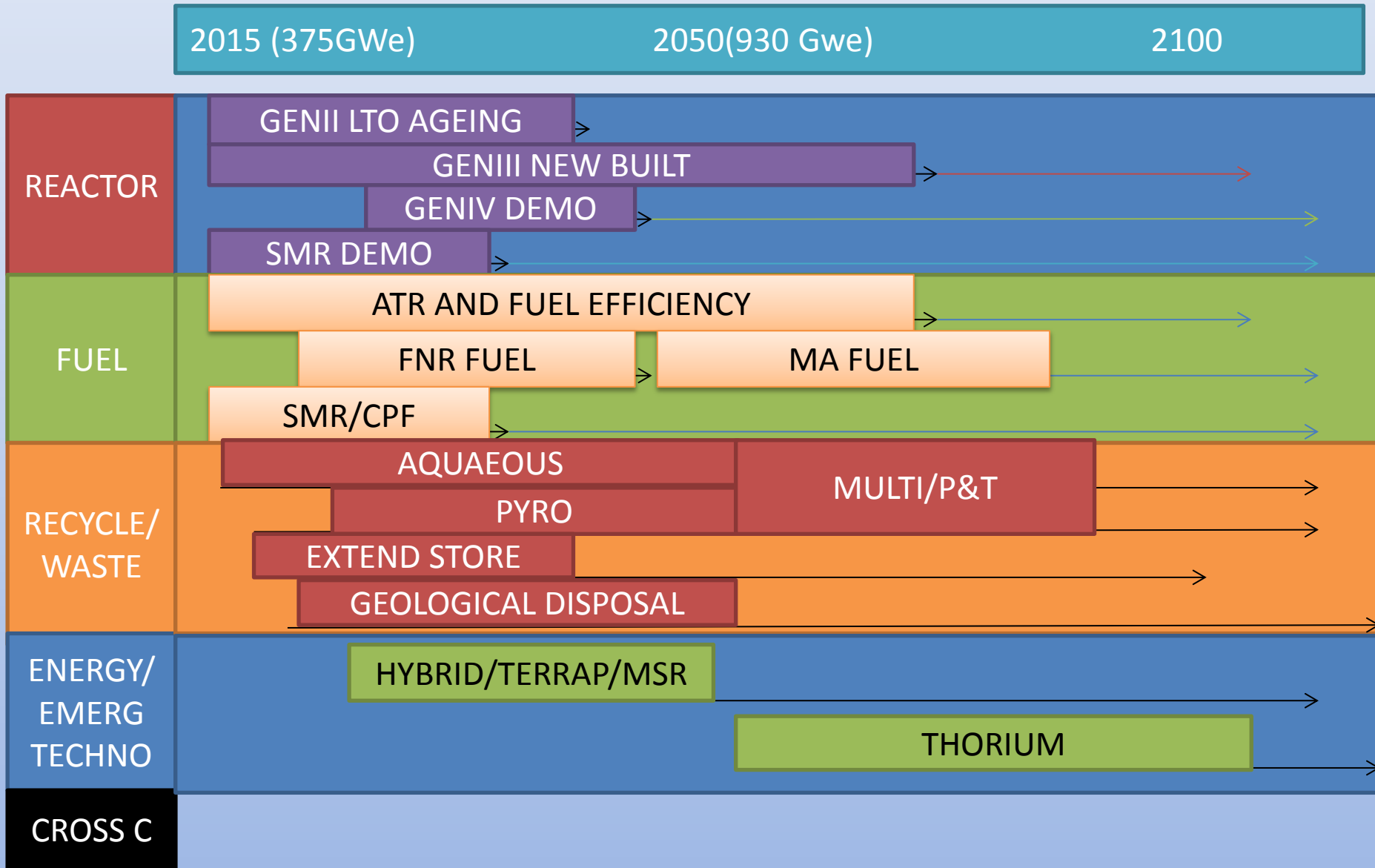
Main Categories: 1. Reactors, 2. Fuel, 3. Recycling and Waste Mgmt, 4. Emerging Technologies in new Energy System, 5. Cross Cutting Issues

See next slide for 1 to 4

Crosscutting issues: simulation, I&C, C&S harmonisation, licensing, materials, ISI/NDE, robotics, radiation protection, construction planning, E&T/knowledge, public involvement,...

Programmes and Infrastructures: sequence? Or put focus?

Think out of the box: other energy sectors, other sectors beyond energy: ICT, nanotechnologies,...



METHODOLOGY for the Roadmapping:

Need for « strict methodology »? Ex: GIF methodology, US Innovation Workshops, US INL Fuel Cycle methodology, SNETP methodology, UK NIRAB methodology... all very time consuming... time to create own methodology...

OR

Experts brainstorming on defined « categories/topics»? How to select the categories/topics... Adv panel vs Expert Groups? Should integrate people who were engaged in roadmappings + some « visionary » outsiders for balance, neutrality and new ideas: who?

BUT need « criteria » for setting priorities (not gaps yet – comes later after inputs from survey): to be defined by the Adv Panel, could look at criteria in existing roadmaps, research vs industry (TRL), need for new infrastructures, 2050 perspective low carbon new energy system, cost,...

PROCESS (organisational) for the Roadmapping:

Timing: have « some » priorities defined and agreed for September 2016, and « some » gaps for November 2016 - proposals for cooperation as input for step 3 and Final Workshop

Advisory Panel vs dedicated Expert Groups and support by the Secretariat (staff/consultants) – Advisory Panel to select « topics » for Expert Groups (granulometry? see scope: 5?), define criteria, reassemble all pieces to come out with final priorities.

Who? Advisory panel and Expert Groups: from Research, Industry, Regulators/TSOs, Waste Agencies – having done roadmaps + outsiders – Chairpersons – target number of participants (max 20/10)

Where to meet? Voluntary Contributions?

Number of meetings and time periods:

Advisory Panel: December, June, October. Exp Groups (1meet/topic): Feb-April

ToRs for Roadmapping NI2050 and Adv Panel/Expert groups:

***Explain background NI2050 – Step 2: top-down roadmapping of fission RD&D priorities – result of Launching Workshop/NDC (« mandate »)
Objectives, Scope, Methodology, Process (Adv Panel and Expert Groups)
Consensus***

***Adv Panel: role, selection of participants, selection chair (rotating?)
Expert Groups: role, selection of participants (by chairs?), selection chairs
(Adv Panel members?)
Secretariat role, consultants
Meetings location and financing***

Outcomes and reporting (to NDC) + Informing Steering Committee

Timeframe for the Adv Panel and Expert Groups – until NDC meeting mid 2017 – extendable or revised if so agreed by NDC

AOB

Next Steps and planning:

Summary Record and ToRs, SC meeting 28-30 October

Date for next Advisory Panel Meeting – Where ?

China

IAEA?

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