European Utility Requirements for LWR nuclear power plants

EUR status, the EUR works since 2005

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EUR seminar 2007

Nice, May 15 2007
EUR in 2005 - 2007

- The EUR organisation and the EUR document in 2007
- What was foreseen, what has been done since 2005?
The EUR organisation in 2007

A group of the major European utilities:
- operating nuclear units: 150 LWR + others
- committed to keeping the nuclear option open in Europe
- in competition with each other
- sharing specification and development works for future LWR plants

The group keeps enlarging
The EUR document consists of four volumes:

**Volume 1:**
- Main policies & objectives

**Volume 2:**
- Generic nuclear island requirements

**Volume 3:**
- Applications of EUR to specific projects

**Volume 4:**
- Generic conventional island requirements
A large circulation

CDROMs

Internet

http://www.europeanutilityrequirements.org
What has been published as of 2007

Volume 1
- Revision A: 03/1994
- Revision B: 11/1995
- Revision C: 04/2001

Volume 2

Volume 3
- Revision A: 11/1996
- Revision B: 03/2000

Volume 4
- Revision A: 11/1996
- Revision B: 03/2000

- BWR 90 subset: 06/1999
- EPR subset: 12/1999
- EPP subset: 12/1999
- ABWR subset: 12/2001
- SWR 1000 subset: 02/2002
- AES92 subset: 03/2007
EUR volume 3 (1)

6 subsets of volume 3 already published

**BWR 90/90+**
- 1400 MWe
- Evolutionary BWR
- Westinghouse Atom

**EPR**
- 1500 MWe
- 4-SG Evolutionary
- PWR
- Framatome ANP

**EP 1000**
- 1000 MWe
- 3-SG PWR with passive safety features
- Westinghouse Electric & Ansaldo
EUR volume 3 (2)

6 subsets of volume 3 already published

ABWR
1400 MWe
evolutionary BWR
General Electric

SWR 1000
1000 MWe
BWR with passive safety features
Framatome ANP

VVER AES 92
1000 MWe
4-SG PWR with passive safety features
AEP Moscow, GP, KI
EUR volume 3 (3)

a 7th subset of EUR volume 3 to be published

AP 1000

1000 MWe
2-SG PWR with passive safety features

Westinghouse Electric & Ansaldo
what has been done since 2005?
The 2005 roadmap

- Works on Revision D of the volumes 1 & 2 could start in 2007, once the WENRA Reference Levels are stabilized. Publication is foreseeable in 2008-2009.
- A revision C of the volume 4, consistent with revision C of the volumes 1 & 2, is scheduled to be published in 2006.
- Other subsets of volume 3 may be worked out in the coming years (ESBWR, VVER AES92 1500, …)
- Enlargement of the EUR organisation should be continued.
The 2005 roadmaps: a slower pace in 2006

- The EUR activity will be somewhat reduced in 2006 to dedicate the utilities' resource to the interaction with WENRA through Foratom/ENISS

- Main EUR objectives for 2006
  - Publication of the two new subsets of volume 3 dedicated to AP1000 and AES92
  - Publication of the revision C of volume 4
The facts: communication with the outer partners, support to external organisations & enlargement

- Internet as a project information tool
  - an EUR public Web site operational since 2004: the whole of the EUR document (but vol 3) can be downloaded from there.
  - The main events and the associated documents are there
  - A lot of visitors & registered users

- Conferences, courses & seminars
  - Only a few presentations in the main nuclear conferences

- Enlargement
  - An active enlargement process: EA, Endesa, CEZ, ENEL, …
The facts: development of the EUR generic requirements: volumes 1 & 2

- feedback from the projects using EUR
  - analyses of compliance of volume 3
  - Finland 5 call for bids
  - revision of volume 4
- safety harmonisation in Europe (WENRA & ENISS)
- review of Volume 2 to prepare a revision D
  - Main chapter reviewed
  - first chapters being redrafted

Material for a next revision of the EUR vol 2 has been collected. Next steps still waiting for decision.
The facts: development of the EUR generic requirements: volume 4

- review of Volume 4 to prepare a revision C
  - the whole volume had been redrafted in 2003-2004
  - final review in 2006
- The revision C is ready for final editing
- More details later in this seminar
EUR volume 3

- Two new subsets about AES 92 & AP1000 being published
  - Rather slow pace for final editing
  - Publication and distribution during the first half of 2007
- A revision B of the EPR subset has been decided
  - Objective: early 2009
- More details later in this seminar
As a conclusion

- EUR activities focused on a few actions in 2005 - 2007
- The revision process of EUR volumes 1 & 2 has only produced preliminary material so far. A programme may be built once the external environment is sufficiently stabilised (safety harmonisation, …)
- The objectives set for volume 3 (AES92 and AP1000 subsets) have been met. Revision B of the EPR subset is being undertaken.
- The works on volume 4 revision C have been restarted and completed
- Momentum, but rather slow pace …
European Utility Requirements for future LWR plants

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