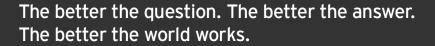
Is turnkey (still) a viable option for nuclear projects?

It can be – if both owners/operators and vendors can look at it as a partnership and agree on sharing the risks.

Ingmar Kohl 14th Regional Conference of the German Branch of INLA Nuremberg, 28 September 2015



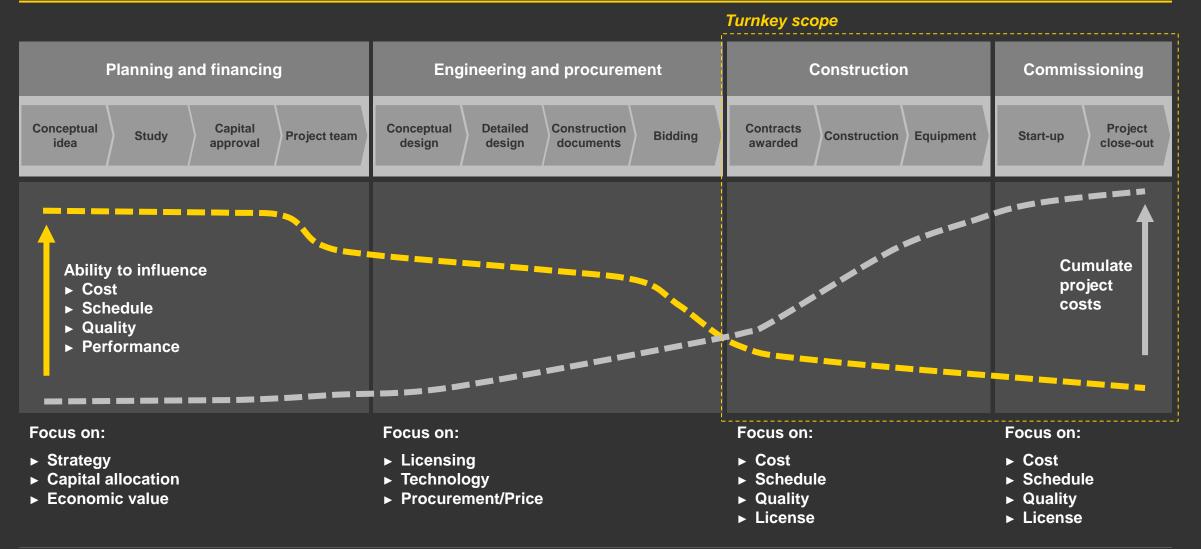


Contents

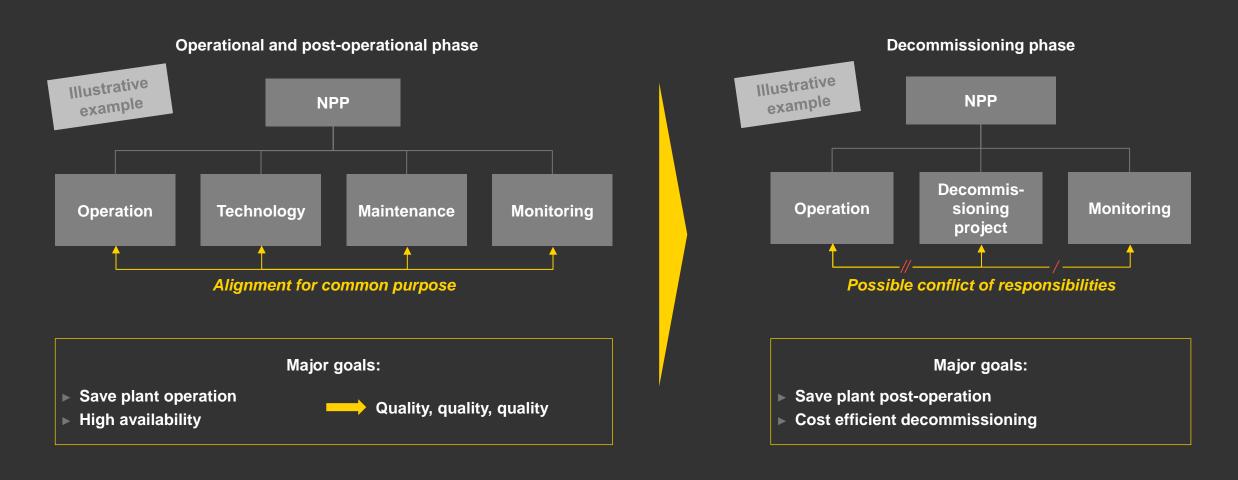
- From new build to brown field a look at the nuclear life cycle
- Perspective and key factors for owners/operators
- Risk allocation the turnkey dilemma…
- ...and a possible way out?
- Conclusion: Is turnkey (still) a viable option for nuclear projects?



A nuclear new build (NNB) project features the same characteristics of other large construction projects

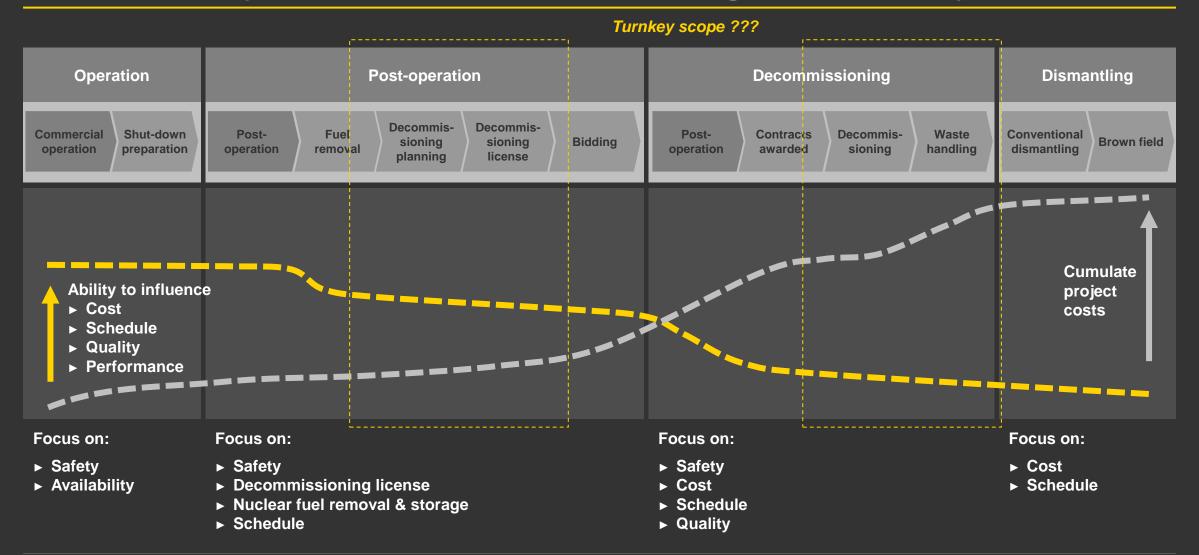


With the end of the plant lifetime, the nuclear operator undergoes an extreme transformation





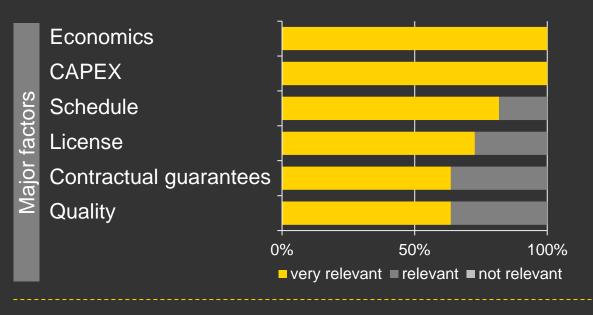
In the decommissioning scenario, focus and goals as well as the ability to influence costs change drastically



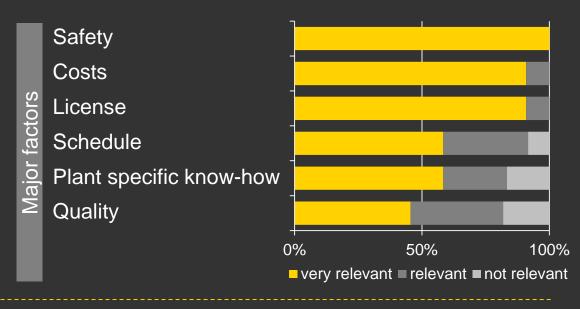


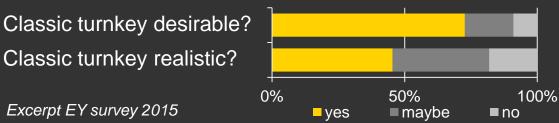
While the key NNB risks are project risks, operators also have to consider the operational risks for decommissioning

NNB

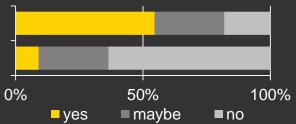


Decommissioning





Classic turnkey desirable? Classic turnkey realistic?





Risk allocation – the turnkey dilemma

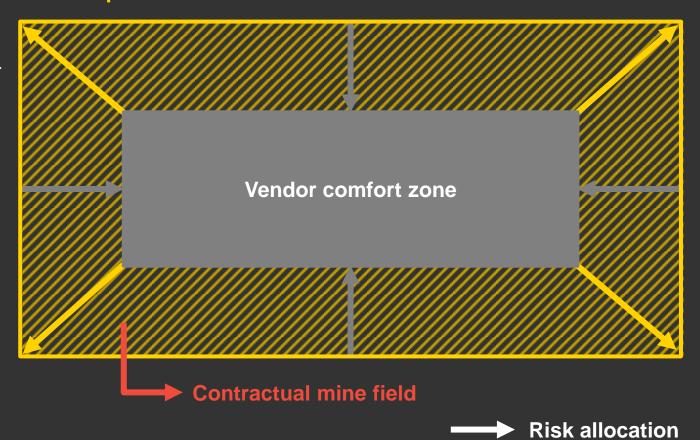
Owners/operator perspective

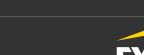
- Large degree of uncertainty regarding project planning and construction
- Turnkey vendor viewed as "one-stop-shop" for risk transfer
- Minimizing risks retained while minimizing the price
- Suspicious of turnkey "black box"

Vendor perspective

- Realize desired margin with turnkey project
- Good understanding of project planning and construction
- Avoidance of risks outside own area of influence
- Calculate provisions for accepted risks to include in the turnkey price

Owner/operator comfort zone





A possible way out – project partnership?

Project partnership models have been discussed in the infrastructure industry for decades, but apparently they are a too radical change compared to the classic owner/operator – vendor set-up, as they require compromises from both sides before the contract is signed.

Prerequisites for a true project partnership:

- Transparent risk map and fair risk allocation
- Owners/operators have to give up certain negotiation advantages
- Vendors have to allow a certain degree of open book
- Pricing structure negotiation for the contract's components (a mixture of T&M, target price and fixed price)



Is turnkey (still) a viable option for nuclear projects?

For new build, yes, if a risk and reward sharing agreement can be reached.

In decommissioning, there are too many conflicting requirements for a classic turnkey set-up to function.



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