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# UCS views on backfitting and forward-fitting policy

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## UCS position on backfitting

- Backfits play an essential role in protecting public health, safety, and security
  - Necessary for timely and effective updating of safety and security requirements to address new information, improved analyses, and changing circumstances
  - “Regulatory stability” does not require regulatory paralysis
- A too-restrictive interpretation of the backfit rule could prevent critical safety enhancements
  - Over-reliance on quantitative analysis without due consideration of uncertainties and credit for qualitative factors (defense-in-depth)
- UCS bears some responsibility for the inadequacies of the current rule (*UCS vs. USNRC, 1987*)
  - “Adequate protection” is highly subjective
  - Backfit test is highly prescriptive



## Previous concerns

- At the 2018 RIC, UCS outlined concerns with the NRC's overly restrictive implementation of the backfit rule
  - Rejecting numerous post-Fukushima proposed safety enhancements
    - Filtered vents
    - Expedited spent fuel transfer to dry casks
  - Potentially blocking needed clarifications and adjustments to post-9/11 security guidance
  - Granting Exelon's appeal of 2015 backfit order



## Flaws in analyses

- Problems with regulatory analysis guidelines:
  - Rely too heavily on PRAs without sufficient consideration of uncertainties
  - Don't consider terrorist attacks
  - Don't give appropriate weight to defense-in-depth
  - Rely on Safety Goals as the benchmark for "substantial" safety enhancements (based only on individual risk and not societal risk)
  - Use generic analyses that don't account for site-specific geographic and demographic factors
- Cost-benefit analyses based on MACCS calculations that
  - Limit radiological consequences to 50 miles
  - Use an outdated value of a statistical life (\$2000/person-rem)
  - Assume effective decontamination within 1 year (unrealistic)



## Recent developments of concern

- Baking in legacy safety and security deficiencies resulting from problems with the initial licensing basis (e.g. “low safety significance issues”)
  - Final mitigation of beyond design-basis external events rule: Is a requirement to address updated external event parameters based on new information or improved analysis REALLY a backfit?
  - Revision of Regulatory Guide 5.69 (three outstanding items determined to be “potential backfits”): Same question regarding updated threat information
  - Oconee security license amendment
- Revision of Management Directive 8.4
  - “forward-fitting” now effectively treated as a type of backfit even though it does not impose new requirements on licensees
  - “imminent threat” determination: could allow lengthy delays in imposing compliance backfits and ensuring adequate protection





## A risky equation

Narrower definition of adequate protection (e.g. greater acceptance of flawed licensing bases that don't meet regulations)

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More rigid adherence to flawed quantitative determination of safety benefits derived from probabilistic risk assessment

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A very high (and possibly unattainable) bar for requiring safety and security enhancements necessary to protect the public