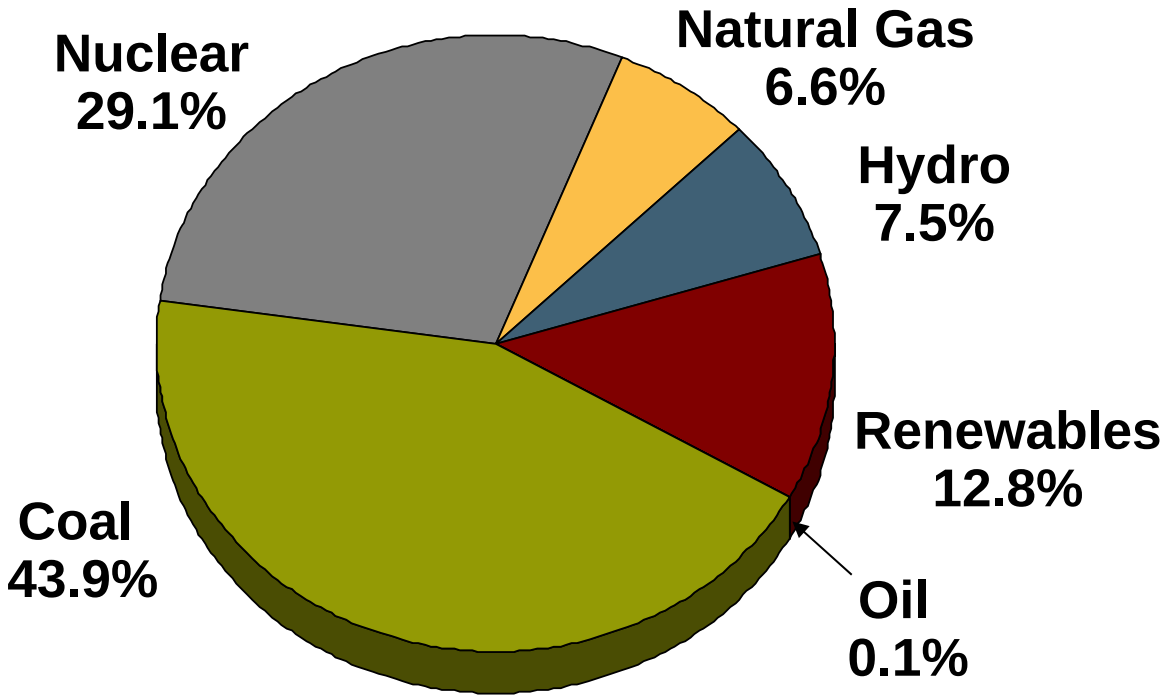
Prairie Island ISFSI License Renewal and High Burn Up Fuel Contention

Xcel Energy Upper Midwest Fuel Mix

We serve 1.6 million electricity customers in five states



12 months ending December 2011

History of Dry Fuel Storage Debate in Minnesota

- Early 1990s
  - Certificate of Need granted by MN PUC
  - Court challenge results in dry storage being considered as permanent requiring MN legislature approval
  - NRC license issued for 48 casks in 1993
    - Limited by state law to use of 17 casks
- 2003 MN legislative changes to dry storage laws
  - Grants dry storage capacity sufficient to operate until end of initial 40-year license
  - ISFSI storage no longer requires legislative approval
- Certificates of Need granted for dry storage to support plant license renewal
- State law requires triennial decommissioning plan to estimate spent fuel storage for 60, 100 and 20 years after plant shutdown

Prairie Island ISFSI License Renewal

- Site-specific license granted in 1993 expires on October 31, 2013
- ISFSI License Renewal Application filed October 11, 2011
- Prairie Island Indian Community petitioned to intervene on August 24, 2012
- ASLB Order on December 20, 2012 granting Prairie Island Indian Community standing and admitting 3 of 7 contentions submitted

Contentions Admitted

- **CONTENTION 2. NSPM'S ENVIRONMENTAL REPORT FAILS TO ADDRESS CUMULATIVE IMPACTS OF RELATED PROJECTS ON THE PIIC, ITS MEMBERS AND ITS LANDS**
- **CONTENTION 4. NSPM'S ENVIRONMENTAL REPORT DOES NOT ADEQUATELY ASSESS THE IMPACTS OF THE PI ISFSI ON THE ADJACENT MINORITY POPULATION**
- **CONTENTION 6: NSPM'S LICENSE RENEWAL APPLICATION IS DEFICIENT BECAUSE IT DID NOT ADEQUATELY ADDRESS THE POTENTIAL DEGRADATION OF HIGH BURNUP FUEL DUE TO AGING DURING STORAGE, SUBSEQUENT HANDLING, AND TRANSPORATION. 10 CFR 72.122 REQUIRES CONFINEMENT BARRIERS AND SYSTEMS TO PROTECT DEGRADATION OF FUEL AND TO NOT POSE OPERATIONAL SAFETY PROBLEMS**

Prairie Island Indian Community's Basis for High Burnup Fuel Contention

- **"NRC has recognized the need to address gaps in technical information needs regarding storage of spent fuel."**
  - U.S. Nuclear Regulatory Commission, Draft Report for Comment, Identification and Prioritization of the Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel (May 2012).
- **"DOE has recognized significant gaps in information regarding storage and transportation of used nuclear fuel."**
  - U.S. Department of Energy, Gap Analysis to Support Extended Storage of Used Nuclear Fuel, Rev. 0 (January 31, 2012).
- **"The NWTRB notes that the most significant potential degradation mechanisms affecting the fuel cladding during extended storage are expected to be those related to hydriding effects, creep, and stress corrosion cracking."**
  - U.S. Nuclear Waste Technical Review Board, Evaluation of the Technical Basis for Extended Dry Storage and Transportation of Used Nuclear Fuel (December 2010).

ASLB Conclusion for Contention 6

- PIIC has presented an admissible contention. To date the Prairie Island ISFSI has stored only low burn-up fuel, and so the effects and challenges of storing high burn-up fuel over the forty-year renewal term are new and material safety issues within the scope of this proceeding. PIIC has raised a genuine dispute that Northern States' application did not sufficiently consider the uncertainties associated with long-term dry storage of high burn-up fuel. Contrary to Northern States' argument that the studies on which the Staff and PIIC rely relate only to "extended storage," (and so of necessity must be for a period longer than the forty remaining years were the ISFSI license renewed), PIIC's claim is that no such bright line can be drawn to mark the age at which degradation becomes a concern. Whether these studies are adequate to show that high burn-up fuel is safe from serious degradation within the forty-year timeframe is a question appropriate for adjudication on the merits. At this contention admissibility stage, there is a genuine dispute as to the studies' interpretation. Accordingly, Contention 6 is an admissible.

Questions?


Xcel Energy®
RESPONSIBLE BY NATURE™

Prairie Island ISFSI License Renewal and High Burn Up Fuel Contention