Plant License Renewal

- Why License Renewal
  - Continued reliable, base load, in-state generation
  - Continued 650 well-paying jobs
  - Continued $200 million / yr state economic benefit
  - Continued state low carbon footprint
  - Continued favorable electric rate contracts
VY in Perspective

- Original plant license
  - 40 year license
  - Issued March 21, 1972
  - Expires March 21, 2012
- Provides 620 Megawatts to N.E. Grid
- Enough power for 620,000 Homes
- ~50% of output currently stays in Vermont
- More than one-third of Vermont’s power
Out of State (52.6%)

- 6.5% Demand Side Management (DSM)
- 13.5% Coal, Oil, Gas & Other
- 32.6% Hydro Quebec

In State (47.4%)

- 33.9% Vermont Yankee
- 6.4% Small Hydro
- 4.6% Wood Burning, Windmills & Farm Methane
- 2.5% Gas & Oil

Source: 2005 Vermont Electric Plan (Figure 9-2)
New England Generation by Source 2006

- Nuclear: 26%
- Natural Gas: 38%
- Petroleum: 9%
- Coal: 14%
- Other: 1%
- Other Renewables: 6%
- Hydro: 6%

Source: VT DPS
Vermont’s Power Contracts

Source: VT DPS

- Other Renewables
- IPP* Wood
- Oil
- IPP* Hydro
- Owned Hydro
- Hydro Quebec
- Nuclear

Graph showing the changes in power contracts from 2001 to 2020.
VY Reliability

- Vermont Yankee produces BASELOAD power – 620 MWe
- 93% Capacity Factor– generates safe, reliable electricity 24/7
Plant License Renewal

Current VY license ends in 2012
- 48 U.S. plants have received 20-Year license renewals
- Rigorous NRC approval process
  - Inspections designed to look at age management of equipment
Plant License Renewal

- Submitted 20 year renewal application to NRC on 1/25/06
  - Over 22,000 inspection hours for license renewal
  - Includes environmental review
  - Expect final NRC decision November 2008
  - Continue NRC oversight program – over 7,480 inspection hours in 2007
Plant License Renewal

- NRC review Scope – Age management
  - Piping and supports
  - Structures (buildings)
  - Heat exchangers
  - Pump casings
  - Tanks (water, fuel oil)
  - Valve bodies
  - Containment
  - Reactor vessel
Plant License Renewal

- Equipment upgrades
  - New recirculation piping 1985
  - New backup power supply 1990
  - New digital instruments
  - New simulator
  - New low pressure turbines
  - New high pressure turbine
  - New main transformer
  - New generator rewind
  - New security modifications
  - New fuel pool cooling system
  - New feed water heaters
  - New dry fuel storage pad
  - New spent fuel racks
Plant License Renewal

- State "Certificate Of Public Good" (CPG)
  - Required by state statute
  - Will be submitted early 2008
  - PSB cannot review until July 2008
  - Legislative approval needed
Section 248 Application Requirements

- Project Plans
- Aesthetic Impact
- Transportation of Equipment and Material to the Site
- Evaluation of Alternatives to the Proposed Project
Section 248 Requirements

- Project Plans
  - No new infrastructure planned
Section 248 Requirements

- Aesthetic Impact
  - No new infrastructure
  - No change in aesthetics
Section 248 Requirements

- Transportation of Equipment and Material to the Site
  - No new construction
  - Continued normal and customary deliveries of goods and services
Section 248 Requirements  Con't

- Evaluation of Alternatives to the Proposed Project
  - Only alternative is to close plant
  - No other base load generation available in near term
Additional WRC Questions

- Spent Fuel Management
  - Spent Fuel Pool
    - Initial loading of 5 canisters
    - “Full Core Discharge Capability” restored

- Dry Fuel Storage
  - New storage pad – 36 canisters
  - Future loading campaigns maintains operational flexibility – expect next campaign in 3-5 years
Additional WRC Questions

- Spent Fuel Management (cont)
  - Status of Spent fuel following Shut Down (S/D)
    - S/D in 2012
      - There will be some fuel in the spent fuel pool, and some in dry fuel storage
    - S/D in 2032 with no DOE action
      - A new storage pad may need to be built to accommodate spent fuel following a S/D in 2032 and during plant decommissioning
Additional WRC Questions

- Plans to file for a second 20 year license
  - None

- Decommissioning Plans
  - Schedule following 2012 S/D
    - The plant would be decommissioned as soon as sufficient funding were available – plan would be placed in SAFSTOR for approximately 15 years
  - Schedule following 2032 S/D
    - Anticipated funding will be sufficient to begin decommissioning immediately following S/D
Additional WRC Questions

- Additional radiation absorbed between 2012 and 2032
  - No appreciable radiation absorption will occur during this period.

- Options for DECON in 2012 or 2032
  - DECON in 2012 would depend on fund growth between now and 2012.
  - DECON in 2032 would likely be possible as a result of fund growth over 20 year period
Additional WRC Questions

- Fund status
  - Current fund as of 9/30/07 is $440,003,672

- Need for power
  - Need for power is going up as economy grows
  - Vermont will lose 2/3 of its contracted power beginning in 2012. This must be replaced.

- Cost of power
  - Future contract prices have not been negotiated

- Employment
  - Continued operation will maintain 650 jobs in S. VT.
Additional WRC Questions

- Taxes
  - Continued operation will continue nearly $10 million in state and local taxes

- E-Plan
  - Current E-Plan initiatives will continue post 2012

- Alternatives
  - No current plans for replacement of 620 MWe of base load power in Vermont