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SOLUTIONS

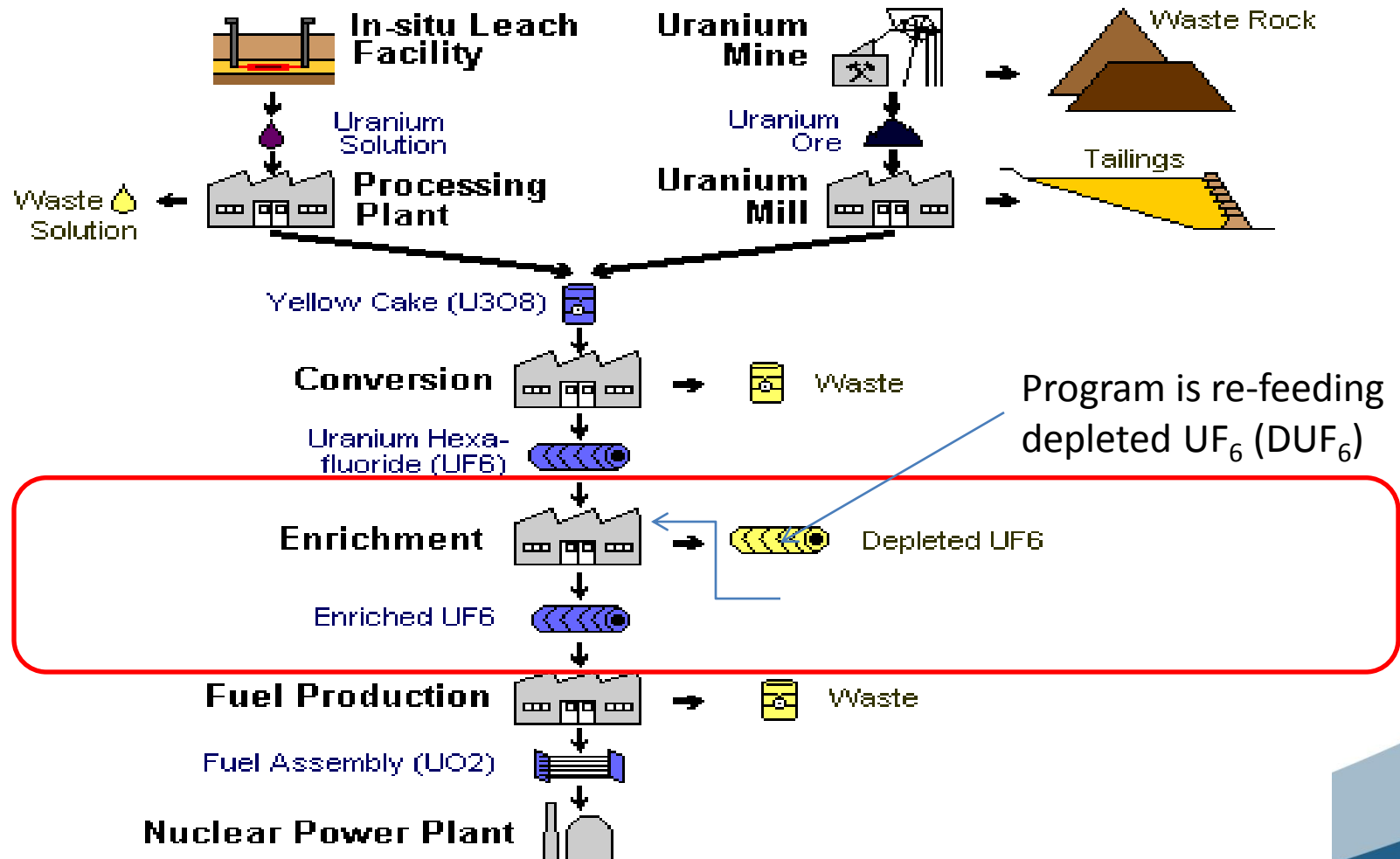
# 2012 Uranium Enrichment Program

April 26, 2012

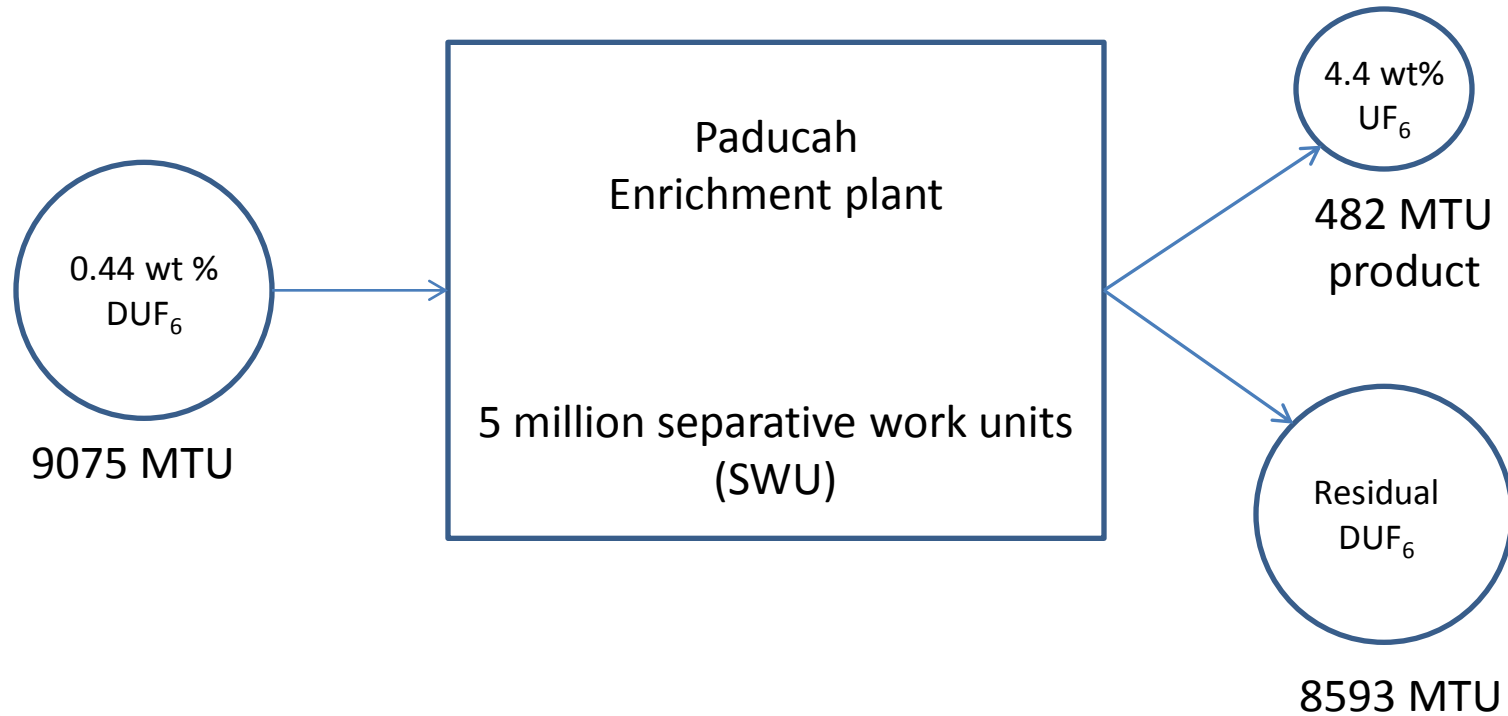
# Overview

- Purpose – Seek Executive Board approval for Tails Program contracts and initial financing
- Program Summary – Atkinson/Rockett
- Financial Requirements for Energy Northwest (EN) and Bonneville Power Administration (BPA) – Ridge
- Program Constraints – Rockett
- Financial Decision Model (Base Case)- Praetorius
- Risks and Legal Issues – Reyff/Dutton
- Plan of Finance-Bond Sale – Armatrout
- Overview of contracts – Rockett
- Recommendations and Approval Conditions - Ridge
- Next Steps - Ridge

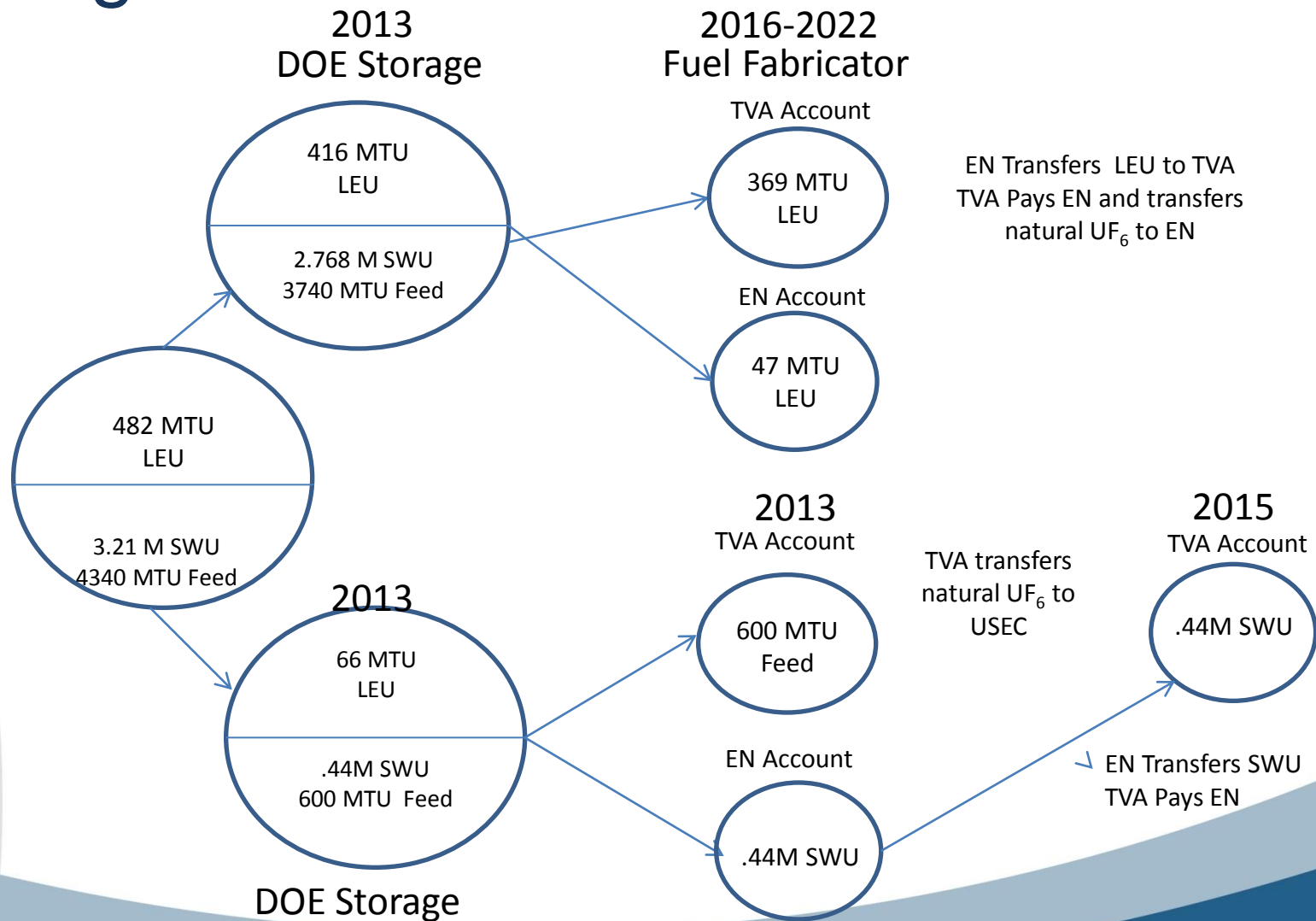
# Nuclear Fuel Cycle



# Program Processing



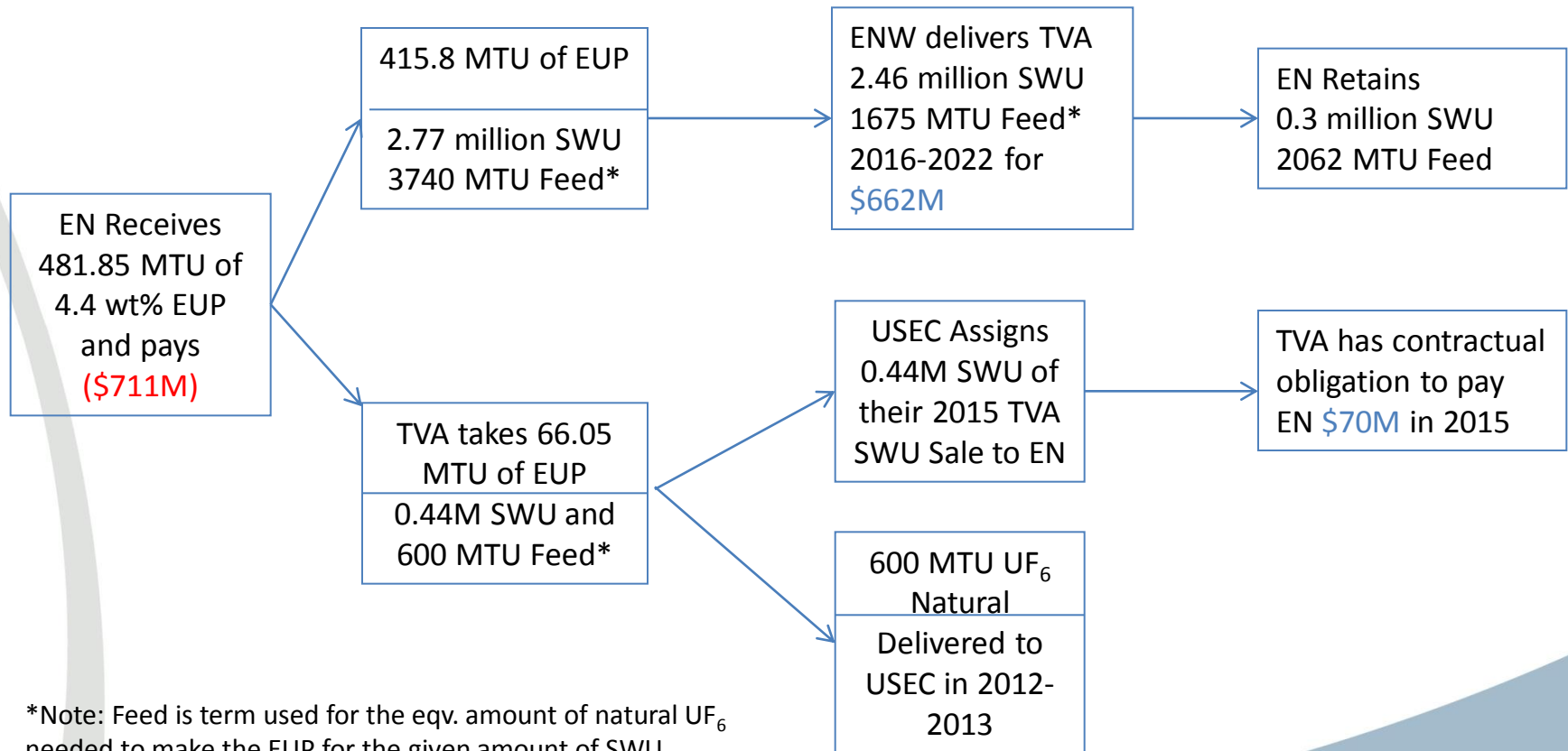
# Program Material Flow



# Program Description – Cash

## Enriched Uranium (EUP) Produced

## Disposition



# Financial Requirements

- At least \$50 million in Net-Present Value at a 12 percent discount rate needs to be assumed
- Provide ~\$20 million/year in rate relief for each of the next two rate periods (i.e. FY14-15, and FY16-17)
  - Or said slightly differently, net benefits of ~\$80 million between now and the end of FY17, with the \$80 million roughly split between rate periods

# Financial Requirements (cont'd)

- Weigh potential impact on BPA's credit rating
- Offload price risk through firm sale of at least 50 percent of enriched product to a creditworthy outside entity at a known quantity and price in advance of the deal (Columbia could use all the fuel during its license-extended life but there is substantial price risk that is better mitigated at the price tendered by counterparty)
- Align transaction benefits with costs from a Northwest ratepayer perspective



# Program Constraints

- All purchase and sales prices for the program have to have predetermined pricing structures which do not have EN taking any risk on the future prices
- Physical uranium forms and locations make additional sales of natural uranium above the planned sales much more difficult

# Financial Decision Model (Base Case)

- Fuel project costs of \$711 million (plus \$4 million of Cost of Issuance)
- Assumes maturities through 2022 (no license extension)
- Interest payments \$126 million (All in rate of 2.64%)
- Amortizes debt in approximate lockstep to TVA sales
- TVA sales FY 2015-2022 \$732 million

# Financial Decision Model (Base Case) (cont'd)

- Achieved \$293 million in saving FY 2013-2028
- NPV of \$70 million at a 12% discount rate exceeds targeted goal of \$50 million.
- Base case model does not try and solve for rate case savings goals

## Decision Model (Financial)

### Uranium Purchase - Economic Value

**Cash Flow Table**

	Subtotal	0 2012	1 2013	2 2014	3 2015	4 2016	5 2017	6 2018	7 2019	8 2020	9 2021	10 2022	11 2023	12 2024	13 2025	14 2026	15 2027	16 2028
Processing Costs	(795)		(795)															
USEC Participation	84		84															
Bond Proceeds	711		711															
Interest Payments	(126)		(17)	(17)	(17)	(16)	(16)	(16)	(13)	(6)	(6)	(2)						
Principal Payments	(715)		-	-	(70)	(24)	(25)	(109)	(279)	(26)	(129)	(51)						
Forward Sales	732			-	70	24	25	110	281	26	129	66	-					
10yr Fuel Plan Purchases - Project	(912)		(27)	(43)	(26)	-	(30)	(18)	(28)	-	-	(42)	-	(38)	-	(38)	-	(67)
10yr Fuel Plan Purchases - No Project	1,314		27	47	29	53	23	55	28	68	32	71	33	73	35	75	36	75
EN Budget	293		(17)	(14)	(14)	37	(23)	23	(11)	61	26	42	33	34	35	36	36	8
BPA Budget	293	(4)	(16)	(14)	(1)	22	(11)	14	7	53	30	40	33	34	35	36	29	6
Rate Period Benefit	293			(36)		11		22		82		73		70		65		6

**NPV Table**

Discount Rate	NPV
1%	\$260m
3%	\$205m
6%	\$144m
9%	\$101m
12%	\$70m

**Rate Period Benefit**

Rate Period	Benefit
14/15	(36)
16/17	11
18/19	22
20/21	82
22/+	214

**Assumptions**

Processing Cost @ \$154/\$WU	\$ 770.0
Contingency \$25m	\$ 25.0
Total Project Funding Requirements	\$ 795.0
Optimized Principal and Interest Repayment	
USEC \$/WU cost @ \$154	
USEC assignment of TVA \$/WU sales \$70.0M	
USEC participation \$84m. (1.0m \$/WU participation)	
CGS consumes balance of unsold inventory	

#### Observation / Conclusions

- 1) NPV of \$70m @ 12% discount exceeds targeted goal of \$50m.
- 2) This assumes a letter of credit for the initial funding requirements.
- 3) July 2012 long term financing take out letter of credit.

#### Contingency Analysis

DOE Cylinder Transfer	\$3M-\$5M
3rd party sampling EUP deliveries	\$1M-\$2M
Enriched Uranium Product (EUP) Storage Containers.	\$2.0M-\$2.5M
Consulting fees	\$0.1M
Storage & Transportation Insurance	\$0.1M
DOE license to store EUP	\$1M-\$3M

**Contingency Balance Range** **\$17.8M-\$12.3M**

#### Cash Flow Timing Issue

TVA Power Cost Fuel Surcharge (TVA will pay escalated \$/WU Cost to Offset Fuel Surcharge)	\$-2.0M-\$5.0M
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#### Pros/Cons

##### 1A - Base Case

##### Pros:

- 1) Amortizes debt in approximate lockstep to TVA sales
- 2) Likely the most prudent way to minimize risk and retire debt
- 3) Eliminates interest rate risk

##### Cons:

- 1) Does not meet BPA goal of \$40 mm savings in 14/15 & 16/17 rate cases
- 2) Creates a \$36 mm loss in the 14/15 rate case
- 3) EN/BPA remain subject to the risk that USEC does not perform on its contract and a premium penalty needs to be paid to redeem the outstanding bonds

# Risks and Legal Issues

- Decision risk assessment
  - Joint activity between EN to BPA
  - Cross-functional input from all levels

# Risks and Legal Issues (cont'd)

- 11 primary risks identified
  - 1 Operational / Fast Track Risk
  - 1 Regulatory & Legal – Bonding Risk
  - 1 Financial – Bonding Risk
  - 8 Regulatory & Legal – Counter Party Performance (Bankruptcy)
- Mitigation for each has been designed and reviewed by cross-functional team
  - Contracts are the primary mitigation
  - Multiple phased financing plan
  - Independent reviews
  - External subject matter experts/advisors

# Risks and Legal Issues (cont'd)

## Most Important Residual Risks and Issues:

- Doing business with a company with financial challenges
  - Ability to negotiate needed contract mitigation
  - Issuance of LT debt
  - Reputation
- Timeframe and complexity of deal development
- Storage – risk of loss
- Administering and monitoring the contracts

# Risk Committee Assessment

- Joint EN/BPA effort
- EN and BPA Risk Committees concurred to proceed with the following requirements:
  - Decision and financial criteria are met
  - Communication strategy developed
  - Final financing structure
  - Necessary contract terms are implemented





# Multi-Phased Financing Plan

- Phase 1 issue Short Term Line of Credit
  - Provide adequate funding to meet initial June and July 2012 fuel purchasing requirements
  - Adequate time for Rating Agency and Investor tours
  - USEC Performance review prior to issuing LT debt
- Phase 2 issue Long-Term Bonds
  - Scheduled to close mid-July 2012
  - Minimizes interest rate exposure and locks in low cost debt

# Multi-Phased Financing Plan (cont'd)

- Structured to provide rate case relief \$80 million
  - Capitalizing interest
  - Deferring principal payments
- Bond Purpose will allow for any Columbia expenditure including Fuel, O&M and Capital
  - Bond size estimated at \$801 million
    - Including \$50 million CGS capital
- Financial risk of issuing LT Debt - Non performance
  - Expensive to buyback bonds \$35 million
  - Option to apply unused funds towards CGS operating costs

## Plan of Finance – Two Phased Approach

### Uranium Purchase - Economic Value

**Cash Flow Table**

	Subtotal	0 2012	1 2013	2 2014	3 2015	4 2016	5 2017	6 2018	7 2019	8 2020	9 2021	10 2022	11 2023	12 2024	13 2025	14 2026	15 2027	16 2028
Processing Costs	(795)		(795)															
USEC Participation	84		84															
Project Fund Deposit	711		711															
Interest on Line of Credit	(0)		(0)															
Cost of Issuance	4																	
Capitalized Interest	36		19	18														
Interest Payments	(173)		(19)	(20)	(20)	(20)	(20)	(20)	(18)	(11)	(9)	(5)	(3)	(3)	(2)	(1)	(1)	-
Principal Payments	(751)		-	-	(28)	-	(5)	(112)	(248)	(67)	(135)	(74)	(14)	(16)	(17)	(19)	(17)	-
Forward Sales	732		-	-	70	24	25	110	281	26	129	66	-	-	-	-	-	-
10yr Fuel Plan Purchases - Project	(912)		(27)	(43)	(26)	-	(30)	(18)	(28)	-	-	(42)	-	(38)	-	(38)	-	(67)
10yr Fuel Plan Purchases - No Project	1,314		27	47	29	53	23	55	28	68	32	71	33	73	35	75	36	75
EN Budget	247	-	-	1	25	58	(7)	16	16	16	16	16	16	16	16	16	18	8
BPA Budget	247	-	0	7	33	42	(1)	16	16	16	16	16	16	16	16	17	16	6
Rate Period Benefit	247			40		40		32		32		32		32		32		6

NPV Table	
Discount	NPV
1%	\$227m
3%	\$193m
6%	\$154m
9%	\$126m
12%	\$104m

Rate Period Benefit	
14/15	40
16/17	40
18/19	32
20/21	32
22/+	102

Assumptions	
Processing Cost @ \$154/SwU	\$ 770.0
Contingency \$25m	\$ 25.0
Total Project Funding Requirements	\$ 795.0
Optimized Principal and Interest Repayment	
USEC SwU cost @ \$154	
USEC assignment of TVA SwU sales \$70.0M	
USEC participation \$84m. (1.0m SwU participation)	
CGS consumes balance of unsold inventory	
\$36m Capitalized Interest	
Delayed principal payments	

#### Pros:

- 1) Creates \$80m savings in 14/15 & 16/17 rate cases in total
- 2) Interest rate lock after ~2months

#### Cons:

- 1) Capitalizing Interest
- 2) EN/BPA remain subject to the risk that USEC does not perform on its contract and a premium penalty needs to be paid to redeem the outstanding bonds



# USEC Contract

- Energy Northwest plans to purchase 4,440,000 SWU from USEC contained in approximately 482 MTU of enriched uranium product (EUP) at an estimated cost of \$695-\$706 million.
  - SWU price is firm fixed. Additional costs for cylinders, sampling, etc.
  - EUP will be provided in storage/transport cylinders.
  - Third party material testing to ensure it meets specifications.
  - Payment upon delivery to DOE for storage.
  - Termination if long term financing not obtained.

# DOE Agreement

- DOE to supply 9075 MTU of depleted uranium to USEC's yard for processing and take back the residual depleted uranium. DOE will also pick up from USEC and provide storage for the EUP produced.
  - EN will reimburse DOE for cylinder delivery and pickup charges. The current estimated cost is \$660,000, but could be higher if additional cylinders are needed due to rejection.



# DOE Agreement (cont'd)

- EN will reimburse DOE for initial and annual storage fees. Current estimates is \$200,000 initially and are \$30,000 per year there after. DOE will store with the material with the same security and environmental requirements as their own material. DOE may not be able to provide blanket risk of loss coverage as would typically be provided with a standard commercial storage agreement.



# TVA Purchase Contract

- EN will sell 2.9 million SWU and 1675 MTU of uranium contained in EUP to TVA from 2015 to 2022 for approximately \$732 million.
  - Prices are firm fixed prices.
  - Purchase is required.
  - Quantities dependent upon amount received from USEC under the program.



# Recommendation

- Energy Northwest recommends that the Executive Board approve a resolution for the award of a contract for enrichment services to USEC, Inc. and a Memorandum of Agreement with DOE for a combined value not to exceed \$711,000,000.00 and the sale of a portion of the uranium received to Tennessee Valley Authority for approximately \$732,000,000.00.
- Energy Northwest recommends that the Executive Board approve a resolution related to short term financing.



# Approval Conditions

- We will return to Executive Board for approval if:
- Risk of loss of onsite material, if we need to assume this risk
- Change in payment conditions related to power sales and USEC deliveries
- Additional negative information regarding counter party financial condition
- If additional agreements are required
- Other items?

# Next steps

- Brief Public Power Staff – April 20 - Complete
- Seek Executive Board Approval – April 26
- Finalize short-term financing – April 26
- Obtain BPA's Non-disapproval for Contracts
- Executive Board call – May 4-11
- Final terms and conditions – May 4
- Signed Contracts – May 11
- Finalize interim or long-term financing
  - Pre-approval of Resolution at May or June Executive Board Meeting
  - Sale of Bonds in Mid-July
  - Complete Budget Amendment
  - Complete 10-year Fuel Plan Amendment